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THE LEGACY OF POPULISM IN THE WESTERN MIDDLE WEST

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Ever since President Conant of Harvard University voiced the opinion some years ago that one of the things the United States needed most was a rebirth of American radicalism to offset the alien varieties being currently imported, historians have been at pains to try to set the noted educator right.¹ American radicalism, most of them contend, is by no means dead, but continues as one of the most active aspects of the American way of life. Its roots lie deep, and its trunk stands strong. It draws its strength from a long line of liberal humanitarians, from a long line of laborites, from a long line of western agrarians. Each of these three groups has influenced the others, and all have drawn on European experience and ideas. But the resulting brand of radicalism is fundamentally an American, not a European, product. And it still endures.²

We are at this time primarily concerned with the contributions that nineteenth-century agrarians made to the later radicalism of what is sometimes called the western Middle West—or as the census takers would say, with awkward accuracy, the West North Central States, plus Wisconsin and Illinois. It was in this region that the farmers' voice of protest was most eloquently and persistently raised. It was here, during hard times, that a philosophy of radicalism was devised sufficient even to endure the acid test of good times during the early twentieth century. What the farmers of this area had suffered from railroads, banks, middlemen, and manufacturers had made them convinced antimonopolists. They were by no means the first to hold antimonopoly views, for the ideas they expressed had often been cogently stated by eastern, or even European, theorists. But the long

struggle with frontier poverty, culminating in the Populist revolt, had instilled in many farmer minds a deep-seated belief that the various combines through which big business operated must somehow be restrained. This attitude was not due to ignorance, but to experience. The farmers knew whereof they spoke. Nor did they have any doubt as to the role the government must play in providing this restraint. Middle Western agrarians were not socialists; on the contrary, they were, or at least they aspired to be, small capitalists. But their property-mindedness did not blind them to the fact that only the power of government could insure them against the unfair advantages of monopoly. They favored government regulation and control, or in extreme cases government ownership, only as a means of retaining for themselves the right to hold property and to do business on a reasonably profitable basis.³

It should be remembered that these rights, throughout the greater part of the western Middle West, were most imperiled by the railroads, and that it was against the railroads, more specifically than against any other type of enterprise, that the farmers aimed their principal reforms. The railroads had created the region; they had brought the population in; they were in close alliance, or even partnership, with other industries, such as lumber, elevator, milling, and packing corporations; they were the chief exploiters of the farm population which was obliged to pay them rates, both coming and going. When the average Middle Western farmer living west of Chicago talked about monopolies and trusts, he was thinking primarily of the railroads. Even the towns and cities were peculiarly railroad-conscious. They had no other equally big businesses, and their very lives as

¹ This article by Professor John D. Hicks is the presidential address presented at the annual meeting of the Agricultural History Society in Washington, D. C., on Sept. 13, 1949.—*Editor*.

For the views of President James B. Conant on radicalism, see his article, "Wanted: American Radicals," in *Atlantic Monthly*, 171:41-45 (May 1943).

² Chester McArthur Destler, "Western Radicalism, 1865-1901: Concepts and Origins," in *Mississippi Valley Historical Review*, 31:354-355 (December 1944).

³ Benton H. Wilcox, "An Historical Definition of Northwestern Radicalism," in *Mississippi Valley Historical Review*, 26:377-394 (December 1939). This article sets forth the principal findings of the author's more elaborate study, *A Reconsideration of the Character and Economic Basis of Northwestern Radicalism*, unpublished doctoral dissertation, dated 1933, in the library of the University of Wisconsin, hereafter referred to as Wilcox, *Northwestern Radicalism*.

trading centers depended upon the fairness, or sometimes the favor, with which railroad rate makers treated them.⁴

Implicit in the Populistic concept of governmental intervention in economic affairs was the assumption that the government itself should be truly representative of the people, that the long-established control of the "plutocrats" should be broken.⁵ The first task that the agrarian leaders set for themselves, therefore, was to capture for the people the machinery of government. It was with this end in view that Farmers' Alliance and Populist candidates sought control of State governments, and that the Populist Party nominated Weaver in 1892 and Bryan in 1896 for the presidency of the United States. Bryan's first defeat rang the death knell of Populism as an effective party organization, and served notice on the people generally that the ousting of the "plutocrats" was to be no easy task. But the idea lived on. As Frederick Jackson Turner once phrased it, "Mr. Bryan's Democracy, Mr. Debs' Socialism, and Mr. Roosevelt's Republicanism all had in common the emphasis upon the need of governmental regulation of industrial tendencies in the interest of the common man; the checking of the power of those business Titans who emerged successful out of the competitive individualism of pioneer America."⁶ If this end were ever to be attained, however, the people must somehow take over their government, and the desire to see this ambition achieved survived intact long after the disappearance of the Populist Party.

Throughout the western Middle West, and to a considerable extent throughout the country as a whole, this legacy of Populism determined the course of political development during the opening years of the twentieth century. What reforms could be instituted to make sure that the people really governed? The movement for the direct primary, for the initiative and referendum, and for various other aspects of popular government grew naturally out of the soil prepared by the Populists. The campaign to limit the power of the Speaker of the national House of Representatives was led by an outraged Nebraskan, George W. Norris.⁷ The

activities of insurgents and progressives generally, culminating in the formation of the Progressive Party of 1912, followed an evolutionary pattern closely connected with Populism. This, I repeat, is not to say that the *only* force back of twentieth-century American radicalism was nineteenth-century Middle Western agrarianism. The contributions of the liberal humanitarians and the laborites must not be overlooked, nor need the influence of imported socialistic ideas be discounted. But when all is said and done, American radicalism would simply never have been what it was but for its long and sturdy line of Granger-Greenback-Populist progenitors. As convinced antimonopolists these reformers believed that the state must use its power to regulate and control the "trusts," most of which, in the western Middle West, turned out to be railroads. They believed, too, that if the state were to be charged with this responsibility its power must be lodged firmly in the hands of the people. Probably they expected greater results from popular rule than was reasonable, but, judged by any standards, they did accomplish a great deal. As a result of their efforts "something new had been brought into politics."⁸

Robert M. La Follette of Wisconsin was not a Populist, and the State which furnished the setting for his career was never Populist territory. And yet it would be hard to find another American of the period more thoroughly representative of Middle Western agrarianism, or another State more receptive to the idea of governmental regulation of business. A conservative in his earlier years, and almost a regular, La Follette had found his hopes for political advancement blocked at every turn by a party machine subservient to the State's industrial leaders. Taking his case to the people, he persuaded a majority of them, farmers for the most part rather than city dwellers, to back him in his war on the bosses. Undoubtedly he was aided in his efforts by the Old World background of many Wisconsin voters, men who were accustomed to a powerful government and now saw no harm in it as long as they could control it. But probably he was aided far more by the strong antimonopoly tradition which among Wisconsin farmers was much older than Populism, and dated back to the Grangers. Above all, he furnished to the cause persistent, dynamic, intelligent leadership, something rarely found among the Populists.⁹

⁴ Wilcox, *Northwestern Radicalism*, 50.

⁵ John D. Hicks, *The Populist Revolt* (Minneapolis, 1931), 405-406.

⁶ Frederick Jackson Turner, *The Frontier in American History* (New York, 1920), 281.

⁷ *Fighting Liberal: The Autobiography of George W. Norris* (New York, 1945), 107-119.

⁸ Wilcox, *Northwestern Radicalism*, 107.

⁹ Robert M. La Follette, *La Follette's Autobiography: A Personal Narrative of Political Experiences* (Madison, Wis., 1913), 18, 19, 133-134, 222-223.

La Follette's full realization of the need for reform probably dated from the day in 1891 when, as he implicitly believed, he was offered what amounted to a bribe by United States Senator Philetus Sawyer, a rich Wisconsin lumberman whose wishes with reference to State politics were generally respected. Out of this ordeal, the facts of which are still in dispute, La Follette emerged with a passionate conviction that he must take the lead in freeing his State from the corrupt influences which were "undermining and destroying every semblance of representative government in Wisconsin."¹⁰ With true perspicacity, he saw that the nucleus of his reform movement would be found among the farmers, and with consummate shrewdness he lined up their most outstanding leaders on his side. In one election year after another he campaigned for the governorship, only to lose because the machine-dominated delegates were in position, if they chose, to ignore the will of the people.¹¹

It is not surprising under these circumstances that La Follette discovered in the direct primary the instrument through which men like himself might have a better chance to hold office and to put into effect the reforms they envisaged. The direct primary idea, like so many others that the western agrarians found useful, was by no means new, although La Follette professed never to have heard of it until 1896. But whereas earlier efforts to apply this principle had been mainly abortive, La Follette, with the help of the recently-adopted Australian ballot, hoped to make popular nominations a living force. The caucus and convention, he maintained, had been "prostituted to the service of corrupt organization." For these outmoded methods he would substitute "a primary election—where the citizen may cast his vote directly to nominate the candidate of the party with which he affiliates, and have it canvassed and returned just as he cast it."¹² In season and out, during campaigns, and between campaigns, he carried this program to the people of the State, and finally in 1900, with the direct primary as a principal issue, he was nominated and elected to the governorship. The completeness of his victory is attested by the fact

that he had the unprecedented plurality of 100,000 votes. Beyond a doubt, it was the support of the farmers that had made this signal triumph possible.¹³

But the battle was not yet won. During his first term in office La Follette failed completely to carry a satisfactory primary law through the legislature, and was obliged to bring the issue to the people again in his campaign for reelection in 1902. Once more the popular mandate was clear, and this time the legislature yielded, although the bill it finally passed contained a referendum clause, designed by opponents of the primary to accomplish its defeat. But the thoroughness with which La Follette's propaganda had done its work was attested by the fact that in the election of 1904 nearly 62 percent of those who voted on the referendum gave the direct primary their support. At this same election La Follette won a third term.¹⁴ The first actual use of the primary system in Wisconsin came with the municipal elections of 1905; not until September 1906, were primary nominations made for State and Congressional tickets.¹⁵

The direct primary, of course, was designed as a means to other ends, but the La Follette forces did not await its coming before attacking the special interests that had long dominated the State. At the same time that La Follette was promoting the primary elections bill, he was also urging upon the legislature a drastic reform in the method of railroad taxation. Under existing procedure, Wisconsin railroads paid an operating fee assessed against their gross incomes, in lieu of other taxation. According to the Wisconsin Tax Commission, this meant that they paid "only .53 percent of their market value (based on the average value of stocks and bonds)," as compared with the 1.19 percent paid by real property on its market value.¹⁶ To remedy this condition La Follette favored the taxation of railroad property on an ad valorem basis, the same as other property; and in 1903 he succeeded, despite the most frantic railroad opposition, in transforming his wishes into law. Nevertheless, every effort was made to be fair

¹³ *Ibid.*, 53; Amos Parker Wilder, "Governor La Follette and What He Stands For," in *Outlook*, 70:631 (Mar. 8, 1902).

¹⁴ Lovejoy, *Direct Primary in Wisconsin*, 78-79, 83, 90-91.

¹⁵ Charles E. Merriam and Louise Overaker, *Primary Elections* (Chicago, 1928), 62, 402; William Francis Raney, *Wisconsin, A Story of Progress* (New York, 1940), 289-290.

¹⁶ *La Follette's Autobiography*, 243.

¹⁰ *Ibid.*, 164.

¹¹ Theodore Saloutos, "The Wisconsin Society of Equity," in *Agricultural History*, 14:78-81 (April 1940); Albert O. Barton, *La Follette's Winning of Wisconsin* (Madison, Wis., 1922), 93.

¹² Allen Fraser Lovejoy, *La Follette and the Establishment of the Direct Primary in Wisconsin, 1890-1904* (New Haven, 1941), 36.

to the railroads. When it came to making the new assessment, not only was the market value of railroad stocks and bonds taken into consideration, but these figures were checked with the estimates of engineers as to the cost of replacement. As the reformers had foreseen, the railroads paid higher taxes. During the first six years the law was in operation the State took in from the railroads about four million dollars more tax money than they would have paid under the old system.¹⁷ Furthermore, expert State accountants searched the books of railroad companies for irregularities, and compelled the payment of back taxes upon rebates, generously given but never reported as income.

La Follette was not yet through with the railroads. Railroad rates within the State, he maintained, were unconscionably high. In a "message of 178 printed pages," presented to the legislature on April 28, 1903, he "furnished a final and unanswerable demonstration" that Wisconsin freight rates were from 20 to 69 percent higher than corresponding rates in the neighboring States of Iowa and Illinois. With the freedom to levy rates they then possessed, La Follette quite plausibly maintained, the railroad companies could easily compensate themselves for high taxes by passing the bill along to their customers. The proper course, then, was to provide for effective regulation by a railroad commission chosen preferably, so La Follette believed, by the governor. In due time this reform, despite the usual violent opposition, reached the statute books. In making the appointments it called for, La Follette took pains to select men of broad experience and high standing. The result was that many unfair rates were reduced, and many discriminations against communities and individuals were discontinued.¹⁸

The La Follette reforms did not end with the railroads. Other public utilities, such as water, gas, electricity, and telephone corporations, were eventually brought under regulatory control, to their own great distress but the equally great financial benefit of the public. A stringent Corrupt Practices Act made difficult the use of large sums to influence the results of primary and State elections. An anti-lobby bill required the official registration of all lobbyists, and even prohibited them from private communications with members of the legislature on matters of legislation. An inheritance

tax and a graduated income tax greatly augmented the revenue of the State, and enabled it to support educational and charitable institutions far more generously than ever before, also, to build mainly from current revenue a new State capitol.¹⁹ A legislative reference library, designed primarily to furnish legislators with expert advice in the drafting of bills, was established, and developed in such a way as to become a veritable hothouse for the growth of progressive measures.²⁰

One result of this extensive program of legislation in Wisconsin was a split in the Republican Party. Calling themselves "Stalwarts," the regular Republicans, those who saw nothing wrong, either with the old convention system or with the important part played in politics by great corporations, fought persistently against the measures advocated by the Progressives, and tried hard to discredit and defeat progressive candidates. But the reforms adopted were too popular to be attacked successfully. The heat of controversy lived on, but in due time the battle between Stalwarts and Progressives lost much of its meaning. The Stalwarts, generally speaking, came to accept the La Follette measures, but to assume that they alone, as efficient conservatives, were competent to administer them. Even when a Stalwart, Emanuel L. Philipp, was elected to the governorship in 1914, the conditions against which La Follette and his supporters had fought so valiantly were not permitted to return. The Progressives, on their part, were usually content with defending the reforms they had inaugurated, and advanced few new principles.²¹

The activities of La Follette in Wisconsin were speedily paralleled by similar activities on the part of other governors in nearly every other State of the western Middle West. As the direction of the political current became increasingly clear, men of outstanding ability did not hesitate to assume the role of reformer. "Do not fear the title of reformer," Governor Albert B. Cummins of Iowa

¹⁹ *Ibid.*, 297-298, 356-357. It should be noted, however, that during La Follette's administration the State of Wisconsin received a "windfall" of well over a million dollars from the Federal Government to cover interest and losses that came from the disposal of State Civil War bonds below par. This money was added to the general fund, and used as if it were income. Raney, *Wisconsin*, 294.

²⁰ Edward A. Fitzpatrick, *McCarthy of Wisconsin* (New York, 1944), 43, 62-71.

²¹ Wilcox, *Northwestern Radicalism*, 110-114.

¹⁷ *Ibid.*, 291-292; Raney, *Wisconsin*, 290-291.

¹⁸ *La Follette's Autobiography*, 280-285, 348-356.

told an audience in 1902, "but put true meaning upon the word. The reformer who destroys is the enemy of mankind. The reformer whose cry is 'march on' is the benefactor of his race." What the Populists had failed to develop by way of effective leadership, such insurgents as La Follette and Cummins, acting through one or the other of the older parties, now provided in generous measure. Indeed, the infection spread to the entire Nation, and an era of reform set in which materially changed the character of State government in the whole United States.²²

In Iowa Albert B. Cummins had found his aspirations for a political career blocked by forces similar to those which had fought so tenaciously against La Follette in Wisconsin. A Pennsylvanian by birth, Cummins had read law in Chicago, and in 1878, soon after being admitted to the bar, had opened a law office in Des Moines. He first attracted attention as chief attorney for a farmers' protective association, which sought to break up an offensive barbed-wire combine. This combine, by the simple device of buying up all available patents and then closing competing factories, had succeeded in advancing the price of barbed wire to figures that were obviously exorbitant. For five years, beginning in 1881, through suit after suit, Cummins fought the farmers' battle, until at last he obtained a decision from the Supreme Court of the United States so favorable to his clients that the monopoly was broken.²³

Cummins' growing interest in railroads led him to give up general practice and to specialize in railroad law. His outstanding ability won him clients among the railroad corporations, but they "soon learned that they did not own him."²⁴ He was never willing to play the role of lobbyist, and as a member of the lower house of the Iowa legislature in 1888 he introduced a "long-and-short-haul" bill that was by no means pleasing to the carriers. During this session, under the leadership of Governor William Larrabee, an outstanding liberal, the legislature enacted a series of reform

measures designed to facilitate the regulation of railroads by the State. Cummins participated fully in this program without losing his standing as a regular Republican, but his unwillingness to submit to control cost him the confidence of the railroads. When he sought election to the United States Senate in 1894, and again in 1896, they branded him as undesirable, and defeated him. The excellent showing he made in the campaign of 1899, however, was described by the *Iowa State Register* as a "marvel," for he was opposed by "a railroad with millions backing the biggest 'boss' the state ever knew, and a half-dozen allied railroads with the shrewdest men in Iowa political life in their employ, half or more of the congressmen, the entire organization of the great Republican party of Iowa, most of the office holders and aspirants, an army of paid agents, hundreds of influential newspapers whose editors are repaying obligations incurred by accepting postmasterships, and scores of federal office holders whose salaries the nation had paid while they have spent three years in steady, continuous work for their benefactor."²⁵

Finally, in 1901, Cummins became a candidate for the Republican nomination for governor. His great object, he told one of his opponents, was "to bring the individual voter into more prominence, and to diminish the influence of permanent organization in the ranks of the party." Undoubtedly he had his eye on the United States Senate, but the road to that goal, he decided, lay through the governorship. In a vigorous campaign he denounced the undue influence that the railroads were exerting in the political life of the State, and advocated, quite after the pattern set by La Follette in Wisconsin, that a program of primary elections be instituted in order to drive from power the corporations that ruled the State. To make his position doubly clear, he mentioned by name the railway representatives who had long dictated the policies of the Republican Party in Iowa, and announced that his candidacy was definitely not by their request. In return for this impertinence they promised to "pound him into the earth," but by this time the people were ready for a change. As a result Cummins entered the nominating convention with a clear majority of the delegates, was nominated on the first ballot, and

²² Johnson Brigham, "The Governor of Iowa, A Sketch of Albert Baird Cummins," in *Review of Reviews*, 34:295 (September 1906).

²³ *Ibid.*, 293; Elbert W. Harrington, "A Survey of the Political Ideas of Albert Baird Cummins," in *Iowa Journal of History and Politics*, 39:340n. (October 1941).

²⁴ Francis Ellington Leupp, *National Miniatures* (New York, 1918), 105-106.

²⁵ Fred E. Haynes, *Third Party Movements Since the Civil War, with Special Reference to Iowa* (Iowa City, 1916), 442, 450.

was later elected at the polls by a plurality of over 83,000 votes.²⁶

The first concern of the reform governor, once he had taken office, was to bring the railroads of the State to book. Back in the days of the Farmers' Alliance, with Governor Larrabee in power, a railroad commission had been created, and notable advances had been scored in the establishment of railroad regulation, but some of the gains proved to be only temporary. As public interest in the subject relaxed, the railroads found ways and means to revive their influence. Railroad commissioners, for example, while elective officials, were nominated by railroad-dominated conventions, and they usually turned out to be far more effective in defending the wishes of the railroads than in looking after the interests of the public. Cummins thus found that much of the work done a decade earlier had to be done all over again.²⁷

Quite as La Follette was doing in Wisconsin, Cummins began by insisting that the railroads pay a fair share of the State's taxation burden. Railroad assessments, he had maintained during the campaign, should be made "upon the same basis as was applied to farms and city lots."²⁸ Familiar, as he was, with every aspect of railroad finance, he was able to dominate the executive council of the State, through which railroad assessments were made. As a result, the total railroad assessment for the year 1902 ran to \$4,041,556 more than it had been in 1901. To facilitate further the correct evaluation of railroad property, a law of 1902 required that the railroads report to the executive council the net income they derived from business originating in Iowa and terminating in other States, or originating in other States and terminating in Iowa, or neither originating nor terminating in Iowa, but carried across a part of the State. All of these items were to be included in one lump sum. By the year 1906, railroad assessments in Iowa had been increased by \$15,000,000. At the same time, similar increases were made in the taxable valuation of express, telephone, and telegraph companies.²⁹

Had the railroad commission of Iowa been an

appointive body, as in Wisconsin, rather than an elective body, it is probable that the effectiveness of railroad regulation in Iowa would have been far more marked. The elected commissioners were rarely well qualified for their responsibilities, and they were generally content to take action only on the complaint of citizens rather than on their own initiative. Of some importance was a measure passed by the Iowa legislature late in the Cummins administration, which authorized the State railroad commission to represent the people of the State before the Interstate Commerce Commission. When, in 1912, the railroads sought to increase their western rates by 5 percent, the careful work of Iowa's commissioner, Clifford Thorne, had much to do with the retention, at least temporarily, of the old rates.³⁰

While the Cummins record on regulatory legislation was hardly as striking as La Follette's, he managed to make himself thoroughly disliked by the railroads. Possibly his most important action on the railroad question was his veto of the Molsberry bill, through which an increase in the indebtedness of certain Iowa corporations was to have been made easy. The real purpose of this bill, according to ex-Governor Larrabee, was to turn the State into "a kind of New Jersey" by making the process of "manufacturing corporations" as easy as possible. This veto greatly intensified railroad hostility to the Cummins administration. When Cummins sought a second term in 1903, the "standpatters" bided their time, but when he chose to violate the Iowa tradition against a third term, and ran for reelection in 1906, they came out against him in full force and nearly defeated him.³¹ Before he left office he had been instrumental in placing on the statute books a two-cent passenger fare law, a new freight rate law, a law to limit the hours of railroad employees, and an anti-free-pass law.³²

³⁰ Harrington, in *Iowa Journal of History and Politics*, 39:370; *Wallaces' Farmer*, 32:533 (Apr. 19, 1907), 34:98 (Jan. 22, 1909), 35:824 (May 27, 1910), 37:282 (Feb. 16, 1912).

³¹ A recent amendment to the Constitution of Iowa had designated even-numbered years instead of odd-numbered years for the election of State officers, and had extended the terms of all such officials for one year. Cummins' second term thus lasted three years, from January 1904 to January 1907.

³² Harrington, in *Iowa Journal of History and Politics*, 39:349, 369-370. In his earlier days Cummins himself made free use of railroad passes, even solicited them.

²⁶ *Ibid.*, 451, 454; Harrington, in *Iowa Journal of History and Politics*, 347; Jonathan P. Dolliver, "The Forward Movement in the Republican Party," in *Outlook*, 96:167 (Sept. 24, 1910).

²⁷ Haynes, *Third Party Movements*, 444; *Wallaces' Farmer*, 35:824 (May 27, 1910).

²⁸ Haynes, *Third Party Movements*, 453.

²⁹ *Appletons' Annual Cyclopaedia*, 1902, 723, 725; Brigham, in *Review of Reviews*, 34:292.

The strenuous campaign of 1906 may have been the influence that brought Cummins to a really effective support of the direct primary. He had advocated the passage of such a law as early as 1903, and thereafter in his biennial messages of 1904 and 1906. "Wealth, and especially corporate wealth," he had stated in his first message as governor, "has many rights; but it should always be remembered that among them is not the right to vote . . . not the privilege to sit in political conventions or occupy seats in legislative chambers. Corporations, as such, should be rigorously excluded in every form from participation in political affairs." Cummins' drive for the direct primary in 1907 got results where his earlier efforts had failed. His opponents claimed that his interest in the reform was due in part to his desire to have an expression of the popular will in his impending candidacy for the United States Senate. If so, he must have been greatly disappointed, for when he entered the primaries in 1908 against the aging Senator William Boyd Allison he was defeated. Two months later, however, the subject was reopened by the death of Senator Allison, and after a special primary had endorsed Cummins' candidacy, he was at last chosen by the legislature to the office he had coveted so long. Meantime, he had recorded his ardent support of an amendment to the national Constitution which would require the election of United States Senators by direct vote of the people.³³

The direct primary was not, of course, the cure-all that many people had hoped it would be. When the time came for voting, the average citizen was likely to be apathetic, while the professional politicians worked without ceasing. Verdicts of the electorate were not always clear-cut. In the Iowa Republican primary of 1908, for example, the Standpat candidates for governor and senator were nominated, while Progressives won the nominations for lieutenant governor and numerous other State and legislative offices. But the results, in general, were good. No longer could it be said, as formerly, that "Delegates to political conventions were selected by the railroad attorneys; were dead-headed [by free passes] to the places of meeting, and were then herded and voted by flocks;" or that convention "Delegates were selected by dead-heads, hauled as dead-heads, herded like sheep, and voted as they were told." It is by no means demonstrable that the primary alone broke the

back of the old railroad machine; in Iowa, as in Wisconsin, the first important victories of the Progressives were scored before the direct primary was instituted. But undoubtedly the primary system threw the bosses' noses still further "out of joint," and made the "rule of the people" more feasible than it had ever been before.³⁴

Cummins' interest in national politics clearly had much to do with the emphasis he placed, while still governor, upon national affairs. One subject he stressed without ceasing was tariff reform. The Republican State convention of 1900, which contributed the "Iowa Idea" to the ages-old tariff controversy, did not abandon the protective principle, but it did advocate "such changes in the tariff from time to time as becomes advisable through the progress of our industries and their changing relations to the commerce of the world." After endorsing "the policy of reciprocity as the natural complement of protection," the Iowa Republicans went on to advocate "any modification of the tariff schedules that may be required to prevent their affording shelter to monopoly." These last three words—"shelter to monopoly"—were the essence of the Iowa Idea. Neither the language of the platform nor the much-used term, Iowa Idea, were the work of Cummins, but they were both given wide publicity by his frequent public statements. His first and foremost objective, he maintained, was the prevention of monopoly. "I am not an advocate of a general revision of the tariff," he said in his first inaugural address, "but I stand for competition, the competition of the Republic if possible, but of the world if necessary. I regard the consequences of a monopoly, or substantial monopoly, in any important product, as infinitely more disastrous than the consequences of foreign importations."³⁵

With reference to the railroads Cummins again showed his consciousness of the national aspect of the problem. State regulation, at best, could be only partially effective; by the time a railroad was

³⁴ *Wallaces' Farmer*, 33:807 (June 19, 1908), 36:162 (Feb. 3, 1911), 37:950 (June 7, 1912).

³⁵ Haynes, *Third Party Movements*, 452-454. See also George E. Roberts, "The Origin and History of the Iowa Idea," in *Iowa Journal of History and Politics*, 2:69-82 (January 1904). "It is, of course, not possible to give the farmer protection on very much," wrote the first Henry Wallace, "for tariffs never become operative, no matter what may be on the statute books, when products are shipped abroad in large quantities." *Wallaces' Farmer*, 34:221 (Feb. 12, 1909).

³³ Haynes, *Third Party Movements*, 456, 464, 467.

big enough to need regulation, it was too big for the States to regulate it. As early as 1905 Cummins appeared before the Committee on Interstate Commerce of the United States Senate to argue for the more adequate protection of States and localities, as well as individuals, against rate discriminations. Both as governor and as senator he showed genuine interest in restraining railroad monopoly and promoting competition. The disappearance of competition, he believed, only opened the way to socialism.³⁶

The leadership of Cummins in Iowa, like the leadership of La Follette in Wisconsin, revealed a widening rift in the Republican Party. The opponents of reform were generally called "Stand-patters," and they more or less accepted the designation, while the faction which supported Cummins assumed the more attractive label of "Progressives." In Iowa, as well as in Wisconsin, the reforms that the Progressives adopted were eventually accepted by the opposition, at least as necessary evils. Railroad domination of the Republican Party was definitely broken, and the direct primary came to stay. If Cummins' devotion to the cause of intrastate reform had only been greater and his ambition for a career in national politics less, it is possible that he might have accomplished more as governor than he did. He was cautious and deliberate at a time when aggressive tactics would have paid good dividends; the most important reforms connected with his name were not put through until after his near-defeat for a third term. "A La Follette," wrote Herbert Quick in 1906, "would have at least had the issues made up in less than five years." It is quite possible that the antimonopoly, farmer-minded voters of Iowa were in their thinking well in advance of their leader.³⁷

It would have been strange indeed if so pronounced a movement for reform as was manifest in Wisconsin and Iowa had failed to affect Minnesota. Conditions in the three States were much alike, but effective leadership was essential, as the careers of La Follette and Cummins amply demonstrated, if the power of the vested interests was to be broken. Minnesota, ever since Populist times, had suffered from a dearth of able leaders. The men who won high office in the State, while ready

enough to give devoted lip service to measures of reform, turned out all too frequently to be mere time-serving politicians, more interested in retaining office than in promoting the principles they preached. Not until the election of 1904, when John A. Johnson, a Democrat, won the governorship, in spite of Minnesota's normal Republicanism, was any very genuine progress registered.³⁸

Johnson had had no such struggle for political survival as had motivated both La Follette and Cummins, but he had a life story full of emotional appeal. He was the first native Minnesotan, it transpired, ever to hold office as governor of the State. His parents were humble Swedish immigrants, early settlers in Saint Peter, where Johnson was born in 1861. His father, a blacksmith, was unfortunately too fond of drink to provide an adequate living for his family, so young Johnson, because his earnings were needed, was obliged at thirteen years of age to leave school and go to work. Eventually he became interested in journalism, and as the editor of the *Saint Peter Herald*, a country newspaper, he gained prominence in his own community. For a single term of four years, 1899 to 1903, he represented his district in the State senate, but his constituency was ordinarily Republican, and by a narrow margin he failed of reelection.³⁹

By this time Johnson had attracted considerable attention throughout the State, partly because of his great personal charm, which won him many friends, and partly because he had shown himself to be an independent thinker who could express himself effectively both in writing and in speaking. When John Lind, the most prominent Democrat in Minnesota, refused to be considered for the Democratic nomination for governor in 1904, the party leaders turned naturally to Johnson, and induced the convention to nominate him by acclamation. His election in the campaign that followed may be interpreted as a kind of popular protest against the petty factional strife and do-nothing tactics of Minnesota Republicans. While Theodore Roosevelt carried the State as Republican candidate for President by a margin of 216,651 to 55,187, the vote for Johnson was 147,992, and for his Republican opponent only 140,130. Twice thereafter, in 1906 and again in 1908, Johnson won

³⁶ Harrington, in *Iowa Journal of History and Politics*, 39:366, 370n.

³⁷ *Ibid.*, 39:383.

³⁸ Wilcox, *Northwestern Radicalism*, 89-91.

³⁹ William Watts Folwell, *A History of Minnesota*, 3:275-276 (St. Paul, 1926).

reelection by far more substantial majorities, in spite of every effort on the part of the Republican machine to displace him. His sudden death in 1909 cut short what might have developed into a brilliant career in national as well as State politics.⁴⁰

Johnson was handicapped in his leadership by having to deal, throughout his three administrations, with legislatures opposed to him politically. What was more important, he could not even count on the support of a sufficient number of reformers to provide the necessary legislative majorities to put through the reform measures he desired. His victories were therefore incomplete, but his interest in freeing the State from corporation control, and in establishing popular government, was fully demonstrated. The fact that the people stood by him in one election after another indicates that he read the public pulse aright. And, with the spirit of reform riding high, Johnson did accomplish a great deal. Undoubtedly one of his greatest assets in obtaining a certain measure of support from Republican legislatures was the fear of the Republicans that the Democrats might get the credit for being more responsive to the current demand for reform than the Republicans.⁴¹

On the dominant problem of the railroads, Governor Johnson's contributions were somewhat less spectacular than those of La Follette and Cummins. A State railroad and warehouse commission already existed, but its members were reluctant to make full use of the powers they possessed. On one occasion, during the summer of 1906, Johnson was obliged publicly to demand action from the commissioners in order to induce them so much as to grant a request of the three principal railroads of the State to reduce their grain rates by approximately 10 percent. "One speech of his," according to his biographers, "resulted in a voluntary reduction of ten percent in certain classes of freight in northern Minnesota." Finally, after the subject of intrastate freight rates had been fully investigated, the legislature, by law, cut the rates on grain, coal, lumber, and livestock an average of 10 percent. Other railroad measures enacted during Johnson's administration included a reciprocal demurrage law, "subjecting carriers to the same penalties for delay in furnishing cars

as carriers impose upon shippers for delay in loading cars," an anti-pass bill, and a two-cent passenger fare bill.⁴²

The Johnson record of reform extended well beyond the railroad sphere. Johnson was deeply interested in the insurance problem, and induced the legislature to pass what "amounted to a code of life, fire, and marine insurance." He also signed measures extending the jurisdiction of the State bureau of labor, industries, and commerce, creating a department of banking, and permitting cities to own and operate such public utilities as "street-railways, telephones, water works, gas works, and electric light, heat, and power works." He had little to do, however, with the extension of the direct primary into Minnesota. Like many another State, Minnesota had long made some effort to control the party primaries through which delegates to conventions were chosen, but it took more advanced ground when, as early as 1899, its legislature passed an act for the use of the direct primary, in Hennepin County only, as a substitute for the customary caucus and convention nominations for city, county, judicial, school, and similarly nonpolitical offices. Two years later this act was extended to the entire State, thus making Minnesota the first State in the Union to require the universal, although strictly limited, use of the direct primary. But it was not until 1912, after the direct primary movement had gathered irresistible momentum, that the Minnesota legislature got around to the enactment of a direct primary law equally applicable to all State offices.⁴³

In Missouri the reform governor was Joseph W. Folk. Unlike La Follette, Cummins, and Johnson, who rose to prominence mainly through rural support, Folk made his name known first as the chief law-enforcement officer of a large city, Saint Louis. In this capacity, during the years 1901-02, he exposed and prosecuted a group of "boodlers," including the city boss, whose deals with corrupt business interests had cost Saint Louis taxpayers princely sums. Twelve of the culprits were convicted and sent to jail. Folk then turned his attention to grafting members of the State legislature

⁴⁰ Day and Knappen, *Johnson*, 159. See also R. W. Oppegard, *Governor Albert Johnson and the Reform Era in Minnesota*, 46-48, 52-67, unpublished master's thesis, dated 1937, in the library of the University of Wisconsin.

⁴¹ Folwell, *Minnesota*, 3:287, 4:366 (1930).

⁴⁰ Frank A. Day and Theodore M. Knappen, *Life of John Albert Johnson* (Chicago, 1910), 52-114.

⁴¹ *Ibid.*, 119-142; Folwell, *Minnesota*, 3:277-283, 287.

and the State administration. The shocking conditions he revealed blasted numerous reputations, and made Folk the logical candidate of the Democratic Party, to which he belonged, for the governorship in 1904. Nominated, less by the support of the cities, where frightened bosses did all they could to defeat him, than by the rural counties, where the spirit of reform was strong, he won the election handily in spite of the fact that the Republicans carried the State in the voting for President, and for every other State office, except governor.⁴⁴

During his four years in office Folk used the executive power so effectively that reluctant legislatures were obliged to enact a large number of the reform measures for which the times called—laws for the more effective regulation of the railroads and public utilities, an anti-lobby law, a direct primary law, and a constitutional amendment making possible the use of the initiative and referendum. The Missouri constitution limited the governor to a single term of four years, so Folk had no opportunity to run for reelection. His Republican attorney general, Herbert S. Hadley, who had successfully brought suit against three Missouri railroads for combination in restraint of trade, and had won an important case against the Standard Oil Company, succeeded Folk as governor, and continued in similar vein. Folk, perhaps unwisely, sought election in 1908 to the United States Senate, but he was defeated in the primary he had helped to create by the veteran politician, William J. Stone. It is of some significance, perhaps, that Folk carried 74 counties to 40 for Stone, and that the issue was settled by Stone's decisive victory in the cities. The country population remained loyal to Folk.⁴⁵

What happened in all the other States of the western Middle West differed only in detail. No doubt, as time went on, governors sought consciously to imitate the records of such reformers as La Follette, Cummins, Johnson, and Folk. A reform attitude payed dividends; even the President of the United States, Theodore Roosevelt, had been quick to discover and exploit that fact. In South

Dakota Coe I. Crawford turned his back upon his earlier career as railroad lobbyist, sought the Republican nomination for governor upon a platform that was strongly reminiscent of the La Follette demands in Wisconsin, and after a defeat in 1904 at the hands of the machine, won handily in 1906. In Kansas a well-to-do business man, Walter R. Stubbs, was impressed as a member of the legislature with the inefficiency of State government, and started out to do something about it. Eventually he realized that corporation control was the principal affliction from which Kansas suffered, and became an ardent proponent of all the leading progressive reforms. After a decisive defeat at the hands of the machine in 1906, Stubbs won nomination and election to the governorship in 1908, and served two terms.⁴⁶ In North Dakota John Burke, a Democrat, was the reform leader. With the dominant political party, the corporations, and the leading newspapers of the State all against him, he was three times elected governor by excellent majorities, in 1906, 1908, and 1910.⁴⁷ In Nebraska, the reform leadership was less personalized, but two progressive Republicans, Norris Brown as attorney general, and George L. Sheldon as a member of the State senate, gave some direction to the movement. Campaigning together in 1906 on a reform program, Brown went to the United States Senate and Sheldon was elected governor.⁴⁸ In Illinois, Charles S. Deneen, a Republican who held the governorship from 1905 to 1913, worked energetically to promote reform. When the Supreme Court, time after time, invalidated legislation for the establishment of the direct primary, he stumped the State "county by county, and ward after ward" to secure a law that the court would sustain. Only in 1912, on the fourth attempt, was such a law enacted.⁴⁹

The reforms inaugurated by the legislatures of the western Middle West during this period were by no means identical, but two clearly-defined objectives stood out preeminently in every State, namely, popular rule, and corporation control.

⁴⁶ Doane Robinson, *Encyclopedia of South Dakota* (Pierre, 1925), 147; Wilcox, *Northwestern Radicalism*, 87-88.

⁴⁷ *Ibid.*, 94.

⁴⁸ Albert Watkins, *History of Nebraska . . .*, 3:277 (Lincoln, 1913).

⁴⁹ Roy O. West, "Charles S. Deneen, 1863-1940," in *Journal of the Illinois State Historical Society*, 34:11 (March 1941); Steffens, *Struggle for Self-Government*, 74-78.

⁴⁴ Lincoln Steffens, *The Shame of the Cities* (New York, 1904), 101-143, and *The Struggle for Self-Government* (New York, 1906), 1-39.

⁴⁵ Frank Warren Crow, Joseph W. Folk and the Reform Movement in Missouri, 58-84, unpublished master's thesis, dated 1937, in the library of the University of Wisconsin.

One type of legislation created, well in advance of most of the other States of the union, a direct primary system of making nominations for office. This reform was fundamental, and throughout the western Middle West it literally revolutionized State government. Nor was there in this region any such backsliding and evasion as occurred in some of the Eastern States. The change had come to stay; candidates were at the mercy of public opinion in a way they had never been before. Sometimes, but not always, the direct primary was supplemented by plans for direct legislation, the initiative and referendum. Honesty in politics was frequently sought by means of drastic anti-lobbying and corrupt practices acts. Direct primaries for candidates for the United States Senate became common, and in some instances a preferential vote, taken at the time of the regular election, bound the legislature to accept the candidate designated by the people at the polls. Presidential preference primaries for the selection of delegations to the national nominating conventions were also frequently provided, particularly as a result of the candidacy of Theodore Roosevelt against Taft for the Republican nomination in 1912.⁶⁰

Along with these efforts to promote popular government came much legislation aimed at the political and economic supremacy of powerful business interests, particularly the railroads. Expansion of the prerogatives of railroad commissions, higher corporation taxes, maximum freight rates, two-cent passenger fares, and anti-pass laws were multiplied in State after State. It is no exaggeration to say that, for the most part, the peculiar hold that the railroads had long had upon the political life of the region was broken. Even the conservative reaction, which began in the western Middle West as early as 1912, and swept numerous "Standpatters" and "Stalwarts" back into office, failed to alter this picture materially. For the only way in which the conservatives could retain their power was to outdo the Progressives in their devotion to the new reforms. The old Populist principle that, if the people could only obtain control of their government, they could defend themselves adequately against the power of monopoly, seemed in process of being demonstrated.⁶¹

The legacy of Populism could easily be traced,

⁶⁰ Merriam and Overaker, *Direct Primary*, 62-63, 141-142; Wilcox, *Northwestern Radicalism*, 107.

⁶¹ *Ibid.*, 110-114; *Wallaces' Farmer*, 33:976 (Aug. 14, 1908).

also, into the realm of national politics. Such reforms as came to be associated with the name of Theodore Roosevelt were ardently supported by the agrarian leaders of the western Middle West—to some extent, no doubt, were inspired by them. According to one enthusiast, Roosevelt was "the spokesman of the people, the expression and exponent of the reform spirit, the mouthpiece of an awakened conscience." But the westerners were willing to go much further than Roosevelt was willing to lead. As La Follette put it, "He acted upon the maxim that half a loaf is better than no bread. I believe that half a loaf is fatal whenever it is accepted at the sacrifice of the basic principle sought to be attained."⁶² The insurgent movement of the Taft administration was even more obviously of agrarian origin. It was, indeed, mainly the work of Senators and Representatives from the Middle West, men who, according to William Allen White, "caught the Populists in swimming and stole all of their clothing except the frayed underdrawers of free silver."⁶³

The fight on Cannonism in the national House of Representatives was carried to a successful conclusion through the leadership of such Middle Western progressives as Norris of Nebraska, Nelson of Wisconsin, Murdock and Madison of Kansas, and Lindbergh of Minnesota. Aid came from some outside supporters, notably Poindexter of Washington and Fowler of New Jersey, but the credit for victory belonged primarily to the Middle Western agrarians.⁶⁴ The assault of the Senate insurgents upon the Payne-Aldrich tariff bill was almost wholly a contribution of the western Middle West. La Follette of Wisconsin, Clapp of Minnesota, Cummins and Dolliver of Iowa, and Bristow of Kansas were the outstanding leaders; only Beveridge of Indiana deserves comparable credit for the work the Insurgents did in revealing the monopolistic intent of the Aldrich schedules.⁶⁵ In both houses of Congress the Insurgents fought also for a graduated income tax, for conservation, for postal savings, for more vigorous railroad regulation, and against a type of reciprocity with Canada designed to benefit the industrial East at the ex-

⁶² *La Follette's Autobiography*, 388; Henry F. Pringle, *Theodore Roosevelt* (New York, 1931), 419.

⁶³ Kenneth W. Hechler, *Insurgency; Personalities and Politics of the Taft Era* (New York, 1940), 21-22.

⁶⁴ *Ibid.*, 33-43.

⁶⁵ *Ibid.*, 83-91, 145.

pense of the agricultural Middle West.⁵⁶ The overwhelming approval of Middle Western farmer constituencies for the program of the Insurgents was repeatedly demonstrated at election time; not only were the radical leaders consistently returned to Congress, but old guard conservatives were retired

⁵⁶ *Ibid.*, 146-219. Reciprocity with Canada, as proposed by the Taft Administration, was according to one Middle Westerner "a jug-handled affair," wholly unsatisfactory to the friends of genuine reciprocity. It "assumes that the farmer owes the manufacturer a living." *Wallaces' Farmer*, 36:438 (Mar. 10, 1911).

with great good will. Eventually most of the reforms for which the Insurgents stood found expression in the platform of the Progressive Party of 1912, but the candidacy of Theodore Roosevelt blurred the issue, and divided their forces. They could not very truly believe in him, nor he in them. But the statement of a close student of the subject that "Wilsonian liberalism and the New Deal were born of Insurgency" carries no appreciable discount.⁵⁷

⁵⁷ Hechler, *Insurgency*, 221.

THE PRE-CIVIL WAR SOUTH'S LEADING CROP, CORN

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For almost 150 years cotton has been regarded as the leading crop of the South. Just before the Civil War cotton exports constituted 60 percent of value of all the exports of the Nation, that is, cotton was more important than all other exports combined. Every schoolboy knows that the dying institution of slavery was revived at the beginning of the nineteenth century to provide the labor to raise cotton and that the South fought the Civil War to preserve slavery because every Southerner's livelihood was more or less related to profitable production of cotton. Frederick Law Olmsted, the observant Northern reporter who traveled extensively through the South in the 1850s, found that he could start a conversation with even the most taciturn of the natives by asking about the cotton crop. But why labor the matter further? Cotton was King. Senator James H. Hammond of South Carolina said so, and almost every true Southerner knew he was right. When the Civil War broke out, England was expected to join with the South because she needed cotton to keep her textile mills running and to close them would mean revolution. Again it is well-known history that cotton surpluses in England, dislike of slavery among the English middle classes, and perhaps a need for Northern wheat kept England neutral instead. King Cotton was dethroned, and King Wheat elevated in his place.

We historians have been so occupied with the changing fortunes of these "king" crops that we have failed to emphasize the significance and con-

tributions of a lowlier citizen, corn. This is the era of historical studies of the common man, and so it is proper that attention be focused on the chief food of the common man of that day, which was corn. From the days of the first colonies, Americans learned to appreciate the many good qualities of this Indian grain. Indeed, farmers—and more people were engaged in farming before the Civil War than in any other occupation—regarded corn so highly that they used most of it right on the farm. They fed it to hogs, chickens, and cattle; they distilled it into corn whisky which when called bourbon was corn's one chance to sound aristocratic; they fed it to the slaves, and they ate it themselves. Corn pone, hoeecake, johnnycake, hominy, mush, corn bread, and succotash, to name only a few, attest to the homely popularity of corn. Because most of the corn was produced and consumed without going to market, corn did not play politics or achieve the headlines or even enter much into statistical records. There are still many persons who believe that the Southerners devoted their time and efforts largely to cotton and imported their foodstuffs from the Midwest. While this belief is not without some foundation, it is more false than true. Let us look at the record of corn and cotton production in the Nation and especially in the South. By the South is meant the States where slavery was legally recognized. The earliest respectable records are the census figures for 1839, 1849, and 1859.

As can be seen from Table 1 the South produced

TABLE 1
Crop Production in the North and the South, 1839, 1849, and 1859

Region and Crop	1839		1849		1859	
	Bushels or Bales (million)	Value (million)	Bushels or Bales (million)	Value (million)	Bushels or Bales (million)	Value (million)
North—corn.....	182.3	\$94.8	243.0	\$136.1	401.7	\$293.2
South—corn.....	195.2	100.5	349.3	199.6	437.0	319.0
South—cotton.....	1.65	52.2	2.46	106.6	5.39	232.8
United States—5 other grains (wheat, rye, oats, barley, and buckwheat).....			275.4		400.2	
Four chief cotton States—corn.....			97.6	54.6	110.0	80.3
Six Border States—corn.....			161.4	90.4	244.5	178.5

Sources: U. S. Census Office, 7th Census, 1850, *Abstract* (Washington, 1853), 88–89, and 8th Census, 1860, *Agriculture of the United States in 1860* (Washington, 1864), 3:xlvi, xciv, and Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), 2:1027, 1039.

TABLE 2

Corn Production in the North and the South in 1849

State	National Rank	North Bushels (million)	South Bushels (million)
Ohio.....	1	59.1	
Kentucky.....	2		58.7
Illinois.....	3	57.7	
Indiana.....	4	53.0	
Tennessee.....	5		52.3
Missouri.....	6		36.2
Virginia.....	7		35.3
Georgia.....	8		30.1
Alabama.....	9		28.8
North Carolina.....	10		27.9
Mississippi.....	11		22.4
Pennsylvania.....	12	19.8	
New York.....	13	17.9	
South Carolina.....	14		16.3
Maryland.....	15		11.1
Louisiana.....	16		10.3
Other free States (11) and Ter- ritories (4).....		35.6	
Other slave States (4) and D. C.			20.0
All free States (16) and Terri- tories (4).....		243.0	
All slave States (15) and D. C.			349.3
Border States (5).....			161.4
Leading cotton States (4).....			97.6

The grand total is 592,300,000 bushels.

Source: U. S. Census Office, 7th Census, 1850, *Abstract* (Washington, 1853), 88–89.

more corn than the North in all three of these census years. On a per capita basis Southern supremacy in corn production was even more marked, for the North was the more populous region. The North's population was double that of the South in 1859. Nor should the fact be overlooked that corn was the leading grain crop of the Nation, being twice as important as wheat, rye,

TABLE 3

The South's Cotton and Corn Crops in 1849

Crop	Pounds (million)	Acreage (million)	Value (million)
Cotton in all Southern States.....	987.4	1.9	106.6
		to	4.9
Corn in all Southern States.....	19,961.5	24.95	199.6
Cotton in four chief cotton States.....	739.5	1.4	79.9
		to	3.7
Corn in four chief cotton States.....	5,462.9	6.97	54.6

Sources: U. S. Census Office, 7th Census, 1850, *Abstract* (Washington, 1853), 88–91; and Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), 2:709, 1027–1029.

The bales of cotton are averaged as 400 pounds and the bushels of corn as 56 pounds. The first acreage figure for cotton is based on a 200-pound cotton average per acre; this was the average in North Carolina and Alabama in 1905, according to L. H. Bailey, *Cyclopedia of Agriculture* (New York, 1909), 2:153. The second acreage figure for cotton is based on J. D. B. DeBow's estimate of 530 pounds per acre in 1852. The average yield of corn per acre is considered 14 bushels. This was the average for North Carolina and Alabama in 1905, according to Bailey, *Cyclopedia of Agriculture*, 2:153, but this amount is low. The recent national average is 33, and a good yield is 70 bushels per acre. The price average of cotton is the \$43.20 per bale at New Orleans, and the price average for corn is the 56 cents per bushel of shelled corn in Virginia.

oats, barley, and buckwheat combined. When analyzed, the corn production figures for 1839, 1849, and 1859 all tell about the same story. For the purposes at hand, therefore, it will suffice to

examine one set. The middle year, 1849, has been selected because the figures are more complete than for 1839, and the year is not at the very end of the period under investigation, as 1859 is.

Table 2 reveals that in 1849 the 15 Southern States and the District of Columbia produced about 60 percent of the Nation's corn crop. Of the 16 leading corn-producing States in the Nation, North and South, 11 were in the South. True, the leading corn States were in the North but so were most of the States with little corn production. The upper South more than the western North deserved to be called the Corn Belt. In 1839 the three leading corn States were Tennessee, Kentucky, and Virginia, and as a region the upper South always led the Midwest in corn production.

Table 3 shows that corn excelled cotton in the South not only in weight, which was to be expected, but also in acreage cultivated and in value, neither of which is usually realized. Whether the modest figure of 200 pounds of cotton to the acre is taken—that was the average in North Carolina and Alabama about 1905—or the more generous estimate of 530 pounds to the acre for the South by J. D. B. DeBow in 1852, corn acreage was several times greater than cotton acreage. Even if the worst possible yield for cotton per acre is compared to the best possible yield for corn, corn acreage exceeded that of cotton. The truth must be that the great fields of cotton made more impression on everyone than the numerous fields and plots of corn. The situation resembled that prevailing in the cattle industry after the Civil War when the Great Plains States were famous for their vast herds but actually had fewer cattle in the aggregate than all the Eastern farms. The Great Plains States did a smaller business on a grand scale whereas the many farms of the East conducted a larger business on a small scale.

Most of the cotton was raised by slaves, and most of the slaves were attached to plantations. Only about 25 percent of the Southern whites belonged to families that owned Negroes and only about 6 percent to families owning 10 or more slaves, enough to constitute a plantation. But whether a man was a small farmer or a planter, whether he was a cotton planter, tobacco planter, rice planter, or sugar planter, he generally grew corn. One observer told of a Mississippi plantation started in 1828 with 10 slaves who were employed the first year in clearing 50 acres of land, 25 for

cotton and 25 for corn. He explained: "The slaves live exclusively on cornbread; their masters vary it with wheat cakes."* One reason why cotton was an ideal crop for the South and for the Negro slaves was that the times when cotton needed little attention coincided with the times that corn required a lot. The two crops dovetailed in many ways.

The South's corn crop in 1849 was worth almost twice as much as the cotton crop. See Table 3. Since most of the corn was not sold because presumably it was worth more to the farmer on the farm, it did not receive the same publicity that cotton did.

Lest this new picture of corn in the South create a false impression of corn's importance, it should be emphasized that corn production was greatest in the northern South, in Kentucky, Tennessee, Missouri, Virginia, and Maryland. Incidentally these five and Delaware were the States where allegiance was most divided in the Civil War. Much of the corn that was shipped south to the planters who bought corn came from these Border States. In the case of the four leading cotton-producing States, Georgia, South Carolina, Alabama, and Mississippi, some of the cotton statistics surpass the corn statistics. These four States supplied 75 percent of the cotton produced in 1849, and yet even they produced 28 percent of the South's corn. The value of their corn was 60 percent of the value of their cotton. Their acreage in corn was, however, greater than their acreage in cotton.

In summary, cotton was the South's main cash crop and as such was always in the limelight, but corn was the South's staff of life. In its homely way corn was as important to the South as cotton, probably more so, just as wheat was perhaps more important to England than cotton when the choice had to be made. Corn certainly was more useful to Southerners in waging the Civil War than cotton. They could eat the corn, but the cotton without a market had little value. Corn provided the means of subsistence in an era when homes were more self-sufficing than they are today; cotton supplied the cash for luxuries and for items difficult to make at home. People could get along without cotton, in fact they had up to the 1790s, but they never got along without corn. Thus the picture of the South's

* Karl Postel [Charles Sealsfield], *The Americans as They Are* (London, 1828), quoted in Guy Stevens Calender, *Selections from the Economic History of the United States, 1765-1860* (Boston, 1909), 651.

devoting all its attention to cotton and importing most of its corn and other foods from the North is as much out of focus as the movie fan's picture of the South as a land of indolent, charming, and luxury-loving plantation owners. The significance

of these corn and cotton comparisons is that they emphasize in another way what has been repeated many times before. The South as a whole was more a region of small subsistence farms than of large cotton plantations.

FROM WOODS TO SAWMILL: TRANSPORTATION PROBLEMS IN LOGGING

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Minnesota was hit hard by the depression that followed the panic of 1857.¹ The lumbering firm of Hersey, Staples and Company at Stillwater had many logs lying in the Saint Croix River, but no buyers. The firm's cash box was empty, notes issued by the partnership were due, and eastern bankers wanted cash, not logs, lumber, or promises. In the spring of 1858, Dudley C. Hall of Boston, a member of the frontier firm, addressed a frenzied letter to the senior partner. "Hon. Saml. F. Hersey," he wrote, "Put all our affairs at Stillwater in liquidation, sell every log we own at Market rates & [do] not have a Single Man under employ. in the Name of God Genl Hersey do Sell all my interest out."²

A few days later Hall again wrote to his partner, urging him to sell everything possible and to remit the proceeds to Boston at once, but a new tone crept into the letter: "I am willing to build the Apple River dam this year but do nothing more. that I think had better be built. . . ."³ Hall remembered the dry summer three years earlier when the logs from the tributary Apple River had been the only ones to reach the mill on the Saint

Croix until late in the summer. The company had cut 15 million board feet of logs that year, but until August the Apple River drive of 2 million feet had been the only logs to get to the mill. A splash dam on the Apple had made the drive possible, while the rest of the season's cut lay bleaching on the sand bars. Lumber prices had soared from \$10 to \$18 a thousand board feet delivered at the mill,⁴ which would have been idle except for the dam on the Apple. Now, three years later, the main Apple River dam needed repairs, and in spite of the firm's financial difficulties the dam was a necessity.

Lumbermen, like Hersey and Hall, knew that transporting logs to the mill was a major problem. Logs were a heavy, bulky, cheap commodity that could not stand expensive transportation charges. Fortunately, logs would float. But many streams were shallow and could not float logs, except during the spring floods. Other streams were not suitable for driving logs. Levis Creek, a small Wisconsin stream, was choked with brush and lined with alders on the hairpin turns. Before logs could be driven on it, the channel had to be cleared and canals cut across the bends. Even then, logs could not be floated on the ordinary stage of water, but only during rises, and men had to be stationed on both banks of the stream to keep the logs moving.⁵

From the beginning stream improvement encountered legal difficulties. To keep mill owners and farmers from blocking the rivers with dams

¹ This article was presented at the session of the Forest Products History Foundation with the Mississippi Valley Historical Association at Madison, Wis., on Apr. 16, 1949. It is a summary of a research project of the Forest Products History Foundation at the Minnesota Historical Society.

² Dudley C. Hall to Samuel F. Hersey, Apr. 14, 1858, in the Hersey, Staples, and Bean Papers.

Except where otherwise indicated all letters and business records hereafter cited are in the Hersey, Staples, and Bean Papers. This collection is in the possession of the Bean family at Stillwater, Minn.

³ Dudley C. Hall to Samuel F. Hersey, Apr. 23, 1858.

⁴ Hersey, Staples & Co., per Stickney, to Whitney, Fenno & Co., Mar. 20, June 2, June 12, July 2, 1855; to Samuel F. Hersey, Apr. 27, 1855, and to Dudley C. Hall, June 19, Aug. 6, 1855; Isaac Staples, per Stickney, to I. and W. [?] Staples, June 19, 1855.

⁵ *Olson v. Merrill*, 42 Wis. 203 (1877), 204, 207.

and other obstructions, a stream had to be declared navigable. In Michigan, Wisconsin, and Minnesota the courts were very helpful in deciding that a stream which could float a saw log was a "public highway" and that saw logs had just as much right to be on the rivers as rafts, barges, and steamboats.⁶ Navigable streams must not be blocked by bridges, piers, fences, or duck ponds. By the same token, lumbermen must not build storage and flooding dams without special legislative permission.

The first legislature of Minnesota Territory granted Elam Greely the right to build a dam across the Snake River and to sluice logs for others at a charge of 10 cents a thousand board feet.⁷ Obtaining a charter from the legislatures meant delay and expense, and the lawmakers did not always do the bidding of the lumbermen. The Wisconsin loggers never succeeded in getting a general act passed. At almost every session bills giving permission to dam specific streams were introduced. Between 1840 and 1900 the Wisconsin legislature granted nearly 350 franchises for the construction of logging dams.⁸ Minnesota loggers were more fortunate. In 1861 the governor signed an act which gave to county commissioners the right to authorize toll logging dams.⁹

The first stream improvements undertaken by lumbermen were relatively simple. Lumbering operations were conducted on the lower courses of the driving streams, and the first temporary dams were constructed cheaply. In 1858 the Apple River dam was rebuilt for \$750 paid in supplies and through the settlement of old debts.¹⁰ As the timber line receded inland from the river banks and ascended the river valleys, the axeman followed. Toward the headwaters, the streams became progressively more shallow, making additional improvements necessary.

Dams increased in numbers, becoming more permanent and more expensive to build. By the late

eighties there were 60 to 70 dams on the Saint Croix River and its tributaries, 41 dams in the Menominee Valley, and some 25 dams on the 95 mile-long Red Cedar River.¹¹ Dams costing from \$6,000 to \$16,000 had been built, and \$100,000 dams were being planned. Added burdens were incurred a few years later, when Wisconsin taxed logging dams 2 percent of their gross earnings.¹²

One of the largest logging dams in the upper Great Lakes States was the 600-foot Nevers Dam across the Saint Croix River. Completed in 1890, it flooded the valley for 10 miles and provided a huge reservoir in which to store both logs and water. It had been planned as a \$100,000 project, but after riparian rights had been acquired, flooded lands purchased, and a series of expensive court cases fought in Minnesota and Wisconsin, the completed dam is reported to have cost more than \$250,000. Such an undertaking would certainly have been a heavy financial burden for a single lumber firm. Following accepted logging practice, the Nevers Dam was built and operated by a special company, the Saint Croix Dam and Boom Company.¹³

The use of the corporate device for improving and driving streams had been used in Maine.¹⁴ When a single logger cut logs in a river valley, he had only technical problems to overcome in driving his logs to the mill. Timberland, however, was not acquired in terms of a river valley, but rather on the basis of the rectangular survey. The section lines of the surveyor and the banks of the driving streams usually had little in common. Most of the driving streams soon had a number of lumbermen

⁶ *Whisler v. Wilkinson et al*, 22 Wis. 546 (1868); *Pound v. Turck*, 95 U. S. 459; *Heerman v. Beef Slough Manufacturing, etc. Co. et al*, 1 Federal Reporter, 145 (1880).

⁷ *Laws of Minnesota*, 1849, ch. 31.

⁸ Wisconsin Public Service Commission, *Log Driving and the Rafting of Lumber in Wisconsin*, by Adolph Kanneberg (Madison, 1944), exhibit 2.

⁹ *Laws of Minnesota*, 1861, ch. 1, sect. 1, 2, and 6.

¹⁰ Hersey, Staples & Co., to Samuel F. Hersey, Mar. 17, 1858; Isaac Staples, to Samuel F. Hersey, Apr. 12, 1858.

¹¹ James L. Greenleaf, "Report on the Water-Power of the Mississippi River and Some of Its Tributaries," U. S. Census Office, 10th Census, 1880, *Census Reports*, 17(2):77, 82, 86 (Washington, 1887); Fred C. Burke, *Logs on the Menominee: The History of the Menominee River Boom Company* (Marinette, Wis., 1946), 24.

¹² James L. Greenleaf, "Report on the Water-Power of the Northwest," U. S. Census Office, 10th Census, 1880, *Census Reports*, 17(2):65-67; *Northwestern Lumberman* (Chicago), Aug. 27, 1887, p. 6, June 9, 1888, p. 5, Sept. 21, 1889, p. 7, Nov. 23, 1889, p. 7; *Mississippi Valley Lumberman* (Minneapolis), Apr. 25, 1890, p. 4, 5, Oct. 24, 1890, p. 5, June 22, 1892, p. 9.

¹³ *Northwestern Lumberman*, Sept. 21, 1889, p. 8, Nov. 23, 1889, p. 7; *Mississippi Valley Lumberman*, Jan. 17, 1890, p. 5, Apr. 25, 1890, p. 4, 5, May 7, 1890, p. 5, May 16, 1890, p. 4-5, June 27, 1890, p. 4.

¹⁴ Richard G. Wood, *A History of Lumbering in Maine, 1820-1861* (Orono, Maine, 1935), 96-139.

logging on the banks, all of whom expected to use the same natural highway at the same time. To keep the logs separated was impossible. Each owner marked his logs by stamping his brand on the ends. Often another mark was axed into the bark, so that ownership could be determined when the logs lay in the water.¹⁵

The first loggers drove their own cut, but when logs were rolled into the upper reaches of the streams, they could not get to the mills until all the logs put in below were driven clear. Agreements were soon reached on stream-driving methods. But some men dumped their logs into the river and left, knowing that a drive coming down would have to take their logs in order to reach the mill. After the logs had arrived at the mill area, the man who had done no driving would claim his logs. If his brand was on the logs, they had to be turned over to him. Someone else had borne the driving cost.

Many expenses attended log drives. The cost of improvements entailed a capital outlay. Wages and provisions for the driving crews must be furnished, and there were other expenses. One lumberman offered to drive a stream for \$300 "in cash, as soon as we shall have completed a good drive, and the use of your camps, Kit, dishes, blankets, and tools, and the use for a few days of four oxen if needed. . . ."¹⁶

The concentration of the lumber industry in the river valleys of the upper Lakes States meant that many lumbermen would try to drive the same stream and also that a single lumber firm would have logs on several streams. In December 1854, there were 82 ox teams logging on Saint Croix Valley streams, 5 of which had less than 4 teams apiece.¹⁷ A year later a Stillwater firm had logs on the Apple, Yellow, Namekagon, and Groundhouse rivers.¹⁸ When spring came, the four drives

were miles apart. The Apple and Yellow river drives were separated by more than 30 miles of wilderness, while the Groundhouse crews were 70 miles farther west. All the drives emptied into the Saint Croix, but until they could be joined in the main river they were independent operations. Log driving associations were often established to handle the logs. Some of these associations were in corporate form; others were organized on a cooperative basis and assessed members for driving costs.

As spring approached, the cutting and banking crews left the woods, and the river drivers appeared. Axe and logging sled were replaced by pike pole and wanagan. On the rushing, surging, crest of the swollen, icy streams the logs were driven to the mill towns.

The location of a sawmill depended upon three major factors. Raw materials must be obtainable; before the railroad era this decreed a site near a waterway. Power must be at hand, and transportation to a market available. The number of suitable locations was limited, and as a result clusters of mills blossomed around the choice sites. Menominee, Saginaw, Muskegon, Eau Claire, Stillwater, and Minneapolis became leading mill towns.

To these towns came the logs. Logs belonging to many lumbermen slid and rolled down the rivers in a tangled mass. The logs were not consigned to a single mill, but to several. The jumble of jackstraws had to be stopped, sorted, and delivered to the mills. A boom reaching across the river would stop the logs, and sorting gaps in the boom would allow the logs to be placed in separate pockets.

The building of a boom across a large stream necessitated a heavy capital investment. Piles on which to hang the boom had to be driven. Large crews of men were needed to sort and scale the logs. Tons of rope must be ready to raft the logs sent down the river. Barracks and boarding houses must be constructed in an area where housing was limited.

Since a boom was a hindrance to navigation, permission to build it had to be secured from the legislature. Few men had the political backing needed to persuade a legislature to grant a monopoly which could stop navigation on a particular river. Only by combining could the lumbermen overcome legislative reluctance. The boom companies which were formed were often combined with the driving companies.

The Menominee River Boom Company drove, sorted, scaled, and rafted the logs on the

¹⁵ Elizabeth M. Bachmann, "Minnesota Log Marks," *Minnesota History*, 26:126-137 (1945); Burke, *Logs on the Menominee*, 50-55.

Numerous photographs in the collection of the Minnesota Historical Society show these bark marks. For examples, see file numbers HD5p69, HD5p125, HD5p127, and HD5p144.

¹⁶ Eugene Shaw, general manager, Apr. 15, 1881, to Elias Moses, in the Daniel Shaw Lumber Company Papers at the Minnesota Historical Society.

¹⁷ *Saint Croix Union* (Stillwater, Minn. Territory), Dec. 2, 1854.

¹⁸ Hersey, Staples & Co., per D. Bronson, Jr., to Dudley C. Hall, Oct. 28, 1855.

Menominee River and its tributaries. The Northern Boom Company brought the logs to Brainerd, Minnesota, and the Mississippi and Rum River Boom Company operated from Brainerd to Minneapolis on the upper Mississippi River. The Muskegon Booming Company worked the Muskegon, and the giant Mississippi River Logging Company and its affiliates drove the Chippewa River and operated the famous Beef Slough and West Newton booms. Between 1851 and 1856 Minnesota Territory incorporated 9 boom companies and passed 6 amendments to the various articles of incorporation.¹⁹ The Wisconsin legislature granted some 75 boom charters prior to 1873.²⁰

Although boom companies were generally considered to be profitable business ventures, they were not always successful. The Saint Croix Boom Company was established in 1851 and received wide publicity.²¹ In spite of capable press agents and the fact that the Minnesota legislature twice amended the articles of incorporation, raising the boom fees from 50 to 65 cents a thousand board feet and allowing the company to collect an additional 50 cents for rafting logs the 21 miles to Stillwater,²² a lumberman stated in 1856 that "The old St. Croix Boom Company have disbanded. Martin Mower bought 31 shares of stock for fifty cents on the dollar, free of all incumbrances."²³ It was succeeded in the same year by the Saint Croix Boom Corporation which had new incorporators and capital.²⁴ The corporation put

the main boom a few miles above Stillwater and devoted its energies to driving and booming. The unprofitable rafting of logs down the shallow, twisting Saint Croix River was abandoned. The new firm did almost \$150,000 worth of business in 1869, making a profit of more than \$17,000.²⁵ In 1873 it made a profit of 32 percent on its capital stock,²⁶ and even in the depression year of 1874 its officers planned to declare a dividend of "30 to 35 per cent. . . ."²⁷ The corporation and its successors continued in operation for 58 years (1856-1914).

A boom or driving company was considered by many small farmers to be a giant corporation with a river monopoly that often damaged riparian fields and meadows. Log jams and splash dams sometimes backed water over the hay lands; drivers would trample upon the sprouting grain. At the same time, a stream brimming with logs was not necessarily beneficial to lumber rafts, barges, or steamboats. The "Boom," the "Monopoly," the "Gigantic Octopus" was supposed to be rich and powerful. The boom company was sued.

Damage suits against boom and driving companies added zest to the pages of more than one rural newspaper; they also provided lawyers with fees. In general, the courts took the stand that damages were allowable only when it had been proved that the companies had been "negligent."²⁸ After suitors found it difficult to prove negligence, various ingenious tacks were tried. One clever plaintiff granted the Tomahawk Land and Boom Company the right to overflow his land, but when logs had floated across his fields and grounded he sued for storage charges. The court held that the river in its widened condition was "a public highway, open to all for navigation."²⁹ In 1898 various sporting and fishing clubs attempted to stop log driving on the Brule River of northern Wisconsin on the ground that log driving ruined the fishing. In earlier decisions it had been estab-

¹⁹ Mississippi Boom Co., *Laws of Minnesota*, 1851, ch. 8, amended 1852, ch. 23, and 1854, ch. 2; St. Croix Boom Co., *ibid.*, 1851, ch. 9, amended 1854, ch. 3, and 1855, ch. 11; St. Anthony Boom Co., *ibid.*, 1851, ch. 17; St. Anthony Boom Co., *ibid.*, 1853, ch. 7, amended 1855, ch. 57; Rum River Boom Co., *ibid.*, 1852, ch. 12, amended 1854, ch. 14; Stillwater Boom Co., *ibid.*, 1854, ch. 46; Lake Pepin Boom Co., *ibid.*, 1855, ch. 49; St. Croix Boom Corp., *ibid.*, 1856, ch. 41; Winona Boom Co., *ibid.*, 1856, ch. 80.

²⁰ Wisconsin Public Service Commission, *Log Driving and Rafting of Lumber in Wisconsin*, 29.

²¹ J. Wesley Bond, *Minnesota and Its Resources* (New York, 1853), 88-89; Willoughby M. Babcock, "The St. Croix Valley as Viewed by Pioneer Editors," *Minnesota History*, 17:282 (1936).

²² *Laws of Minnesota*, 1854, ch. 3, 1855, ch. 11.

²³ Hersey, Staples & Co., per D. Bronson, Jr., to Samuel F. Hersey, Jan. 11, 1856.

²⁴ *Laws of Minnesota*, 1856, ch. 41; Hersey, Staples & Co., per D. Bronson, Jr., to Schulenberg, Boeckeler & Co., Jan. 1, 1856, and to Samuel F. Hersey, Jan. 11, 1856.

²⁵ Summary of Business for Year 1869, St. Croix Boom Corp., enclosure in letter from John S. Proctor to Samuel F. Hersey, Dec. 27, 1869.

²⁶ Balance Sheet of the St. Croix Boom Corporation, Dec. 24, 1873. The actual profit was 31.96 plus percent.

²⁷ Isaac Staples to Samuel F. Hersey, Sept. 28, 1874.

²⁸ *Mississippi Valley Lumberman*, Sept. 8, 1893, p. 5; *Northwestern Lumberman*, Nov. 23, 1889, p. 8, Dec. 21, 1889, p. 5; *Field and Others v. The Apple River Log Driving Co.*, 67 Wis. 569 (1886-7); *Swanson v. The Mississippi and Rum River Boom Co.*, 42 Minn. 436 (1890).

²⁹ *Mississippi Valley Lumberman*, Oct. 4, 1895, p. 11.

lished that logs had as much right on the public waterways as lumber rafts, barges, and steamboats. Now, the court decided that the saw log had as much right to be in the Brule as did the trout.³⁰

Although lawyers adroitly established the rights and privileges of the corporations before the judges, unsympathetic juries sometimes gave adverse verdicts. Eventually some of the corporations, such as the Boom Company of Manistee, purchased much of the bottom lands or resigned themselves to making almost annual damage payments.³¹

Log driving, as a means of transportation, had many disadvantages. Fortunately for the pioneer Lakes States loggers, there were large stands of white pine near the streams. White pine had excellent floatability, but many of the hardwoods were easily waterlogged. Basswood logs were often hollow, and if one became stranded on a sand bar, it quickly filled with sand and water.³² Unpeeled hemlock often sank after it had been in the water a short time.³³ It was sometimes necessary to raft birch, oak, and maple by lashing them to "cedar floaters." Many of the logs sank. In 1904, when a caisson was sunk in the Mississippi River at Minneapolis, 63 submerged logs were found in an area 12 by 60 feet.³⁴ Sunken logs became water soaked, but as long as they remained beneath the water, they did not rot.

Many logs did not reach the booms, although the loss was not due to sinking. During high water logs would often float over the valley floor and were left stranded when the river eased back into the channel. The sun's rays on a wet log promoted rot; worms and insects hastened to the attack. Sawmillers and other riverbank dwellers were accused of log stealing, and as long as logs were cast upon the waters, log thieving was a factor in the lumber business.

The difference between the number of logs which were started on a drive and the smaller number which reached the booms was commonly

termed "shrinkage." In 1908 a surveyor general in Minnesota estimated a 5 percent shrinkage loss in large white pine logs, 10 percent in small white pine, spruce, and large Norway logs, and 15 percent in tamarack, balsam, and small Norway logs.³⁵ As one logger summed up the situation in 1892: "You must calculate on losing about ten per cent. of your logs between the log landing and the mill. There is liable to be an over estimate in the scaling at the landing. Then a few logs get hung up, more get waterlogged and sink. . . . Then the mills along the river steal a good many while some go under the boom and over the falls. I know a firm in . . . [Minneapolis] that within the past few years have charged up a total of \$28,000 to profit and loss on logs lost in this way."³⁶

Using driving streams to transport logs made logging a long-term investment. Expenses were incurred as the logs were cut in the winter, and income was dependent upon the logs reaching the mill market sometime in the summer. As the timber line receded, many loggers were forced to drive for two years to get to the mill.³⁷ A dry season could start an epidemic of mill shutdowns.

The inauguration of railroad logging after 1870 eliminated many of the bad features of driving, but loggers with capital invested in dams, booms, and driving equipment were often slow to change. The first private logging railroads in the Lakes States were built in the late 1870s to haul logs to the driving streams, supplanting the old log sled.³⁸ In the following years the Soo, the Père Marquette, the Chicago and Northwestern and many other common-carrier railroads penetrated timber areas in Michigan, northern Wisconsin, and northern Minnesota, regions that had previously been too far from driving streams to log. Millmen followed the steel rails. Mills on the lower rivers were gradually shut down and were replaced by whirling saws on the new timber frontier.

With capital invested in a form of transportation that some said was obsolete, the logger who still

³⁰ *Ibid.*, Jan. 14, 1898, p. 18, Jan. 28, 1898, p. 7, Mar. 4, 1898, p. 9, Mar. 11, 1898, p. 9-10.

³¹ *Northwestern Lumberman*, July 9, 1887, p. 4, Dec. 21, 1889, p. 5; W. H. C. Folson, *Fifty Years in the Northwest* (St. Paul, 1888), 697; Isaac Staples to Dudley C. Hall, Jan. 1, 1863; John S. Proctor to Samuel F. Hersey, Dec. 27, 1869.

³² Eugene Shaw to John S. Owen, Oct. 24, 1905, in Daniel Shaw Lumber Company Papers.

³³ Eugene Shaw to L. C. Coleman, Jan. 29, 1900, in *ibid.*

³⁴ *Mississippi Valley Lumberman*, Mar. 11, 1904, p. 31.

³⁵ Earle N. Clapp, "Conservation Logging," in *Report of the National Conservation Commission* (60 Congress, 2 session, *Senate Document* 676, serial 5398, Washington, 1909), 2:521-522.

³⁶ *Mississippi Valley Lumberman*, Jan. 29, 1892, p. 3.

³⁷ Statement of S. P. McKnight of Minneapolis, Minn., Dec. 31, 1896, in *Tariff Hearings Before the Committee on Ways and Means* (54 Congress, 2 session, *House Document* 338, serial 3542, Washington, 1897), 526.

³⁸ *Northwestern Lumberman*, Feb. 14, 1885, p. 14, Jan. 15, 1887, p. 2-3, Feb. 12, 1887, p. 27-30.

held timber on driving streams carried on with the old methods of log driving. But by 1887 the loggers of the three upper Lakes States were operating 836 miles of track, divided between more than a hundred private logging railroads. These roads had an annual capacity of almost 2 billion board feet of logs.³⁹ The same year the 21 "principal booms" in the Lakes States handled more than 26 million logs which scaled in excess of 3½ billion board feet.⁴⁰ The river monopoly on log transportation had been broken but not supplanted.

In spite of the numerous limitations, the better driving streams continued to be used as long as there were sufficient floatable logs to make an economical drive. Driving was a cheap way to take a large amount of timber to the mill. In 1879 logs were driven down the Chippewa River at a rate of less than 2 mills per thousand board feet per mile. Even after the cost of booming and scaling was included, the rate was less than 8 mills a mile.⁴¹ In 1885 the Wisconsin River Log Driving Association charged rates varying from 2½ to 7½ mills per thousand board feet per mile.⁴² In 1900 a Minnesota lumberman drove 3 million board feet

of logs 75 miles in one day. The drive cost him 2 cents a thousand board feet, or three-tenths of a mill per thousand board feet per mile. Lumbermen estimated that if he had shipped by rail it would have cost him \$5 a thousand.⁴³ In 1901 the total cost of driving logs down the Menominee River from Florence, Wisconsin, to the Marinette mills was 73 cents a thousand board feet. The railroad rate was said to have been \$3.90, or more than five times the river cost.⁴⁴

Thus, despite the fact that river driving was slow—two logs once took twenty-eight years to reach the Menominee boom⁴⁵—and in spite of the high shrinkage rate, dams and booms continued in use until the river stands of spruce, Norway and white pine had given way to farms or to barren sandy wastes. The lumberman of a century ago, like those of today, had the problem of moving heavy weights of low value for long distances. The answer then was water transportation. But the waterways were limited in number and posed technical problems whose solution was usually beyond the financial capacity of a single lumberman. In an age of individualism—and the logger has always thought of himself as a confirmed individualist—the lumbermen met their transportation problems by combining. The problems were not completely solved by combination, because the factors involved were constantly changing, but in an era of low wage and raw material costs, the loggers evolved upon the waterways of the upper Lakes States one of the cheapest means of transportation that mankind has ever used.

³⁹ Compiled from a survey conducted by the *Northwestern Lumberman* and published in its issue of Feb. 12, 1887, p. 27-30.

⁴⁰ *Ibid.*, Feb. 11, 1888, p. 2.

⁴¹ Daniel Shaw Lumber Co., per Eugene Shaw, to Tabor & Co., Sept. 22, 1879, in the Daniel Shaw Lumber Company Papers.

The rates given are: Eau Claire to Beef Slough, 10 cents per M (56½ mi.); Log Landing (Little Falls Dam) to Beef Slough, \$1.27½ per M (101 mi.), including boomage, 50 cents, rafting, 50 cents, and scaling, 5 cents.

⁴² *Northwestern Lumberman*, Mar. 28, 1885, p. 14.

⁴³ *Mississippi Valley Lumberman*, Oct. 12, 1900, p. 14.

⁴⁴ Burke, *Logs on the Menominee*, 91.

⁴⁵ *Mississippi Valley Lumberman*, Oct. 29, 1897, p. 11

THE AGRICULTURAL PROGRAM OF A LEADING FARM PERIODICAL, COLMAN'S RURAL WORLD

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Colman's Rural World, published at Saint Louis, Missouri, for fifty-one years, was generally recognized as one of the outstanding farm periodicals of the Mississippi Valley during the last third of the nineteenth century and the first decade of the twentieth.¹ It was an outgrowth of the *Valley Farmer*, founded at Saint Louis in 1848, and for seven years printed in a bookshop at the corner of Fourth and Chestnut streets in that city. In 1855 this paper was purchased by Norman J. Colman, a young New Yorker, who had settled in Saint Louis only three years before.²

Colman, who later rose to prominence as one of the leading agricultural reformers in the Midwest and as the Nation's first Secretary of Agriculture, edited and published the *Valley Farmer* under its original name as a monthly for nearly ten years. In 1865 he changed the title to *Colman's Rural World and Valley Farmer* and made it a bimonthly. After a few years, the older name was dropped altogether. In 1868 Colman began to publish his paper as a weekly, and it was continued in this form for the remainder of its history. The paper was absorbed by the *Journal of Agriculture* in 1916.³

The agricultural program of *Colman's Rural World*, in common with that of most periodicals of its kind, was mainly one of education for better farming; agricultural methods which would con-

serve the land and at the same time secure for the farmer a comfortable living were always its chief concern. From its beginning the journal advocated radical changes in the farming methods of the average rural dweller. The tragic effects of soil exploitation, clearly evident wherever the land had been cultivated for any appreciable length of time, were emphasized in almost every issue of the paper. Means of preventing soil exhaustion and of rebuilding depleted land constituted a major share of the journal's program. Paramount among the recommendations for improving agricultural methods were application of manures and lime, regular crop rotation, the raising of legumes, deep and horizontal plowing, underdraining of wet land, and seeding poor cropland with grasses for pasture.⁴

The conditions which produced the scrubby livestock kept on most farms drew repeated condemnation from the paper's editors, while the encouraging of the introduction of better breeds of stock and of the provision for regular and adequate feeding and comfortable shelter in wet or cold weather received as much attention as soil building—possibly even more. Since a well-balanced farm economy was always emphasized as the paper's principal objective, these two phases of its program were complementary. Even where soil exhaustion presented the most critical problem, a better system of stock raising received about equal attention; well-fed livestock produced an abundant supply of manure, a prime factor in soil building.⁵

⁴ Albert Lowther Demaree, *The American Agricultural Press, 1819-1860* (New York, 1941), 12-19, 90. This work gives a good summary of the general program of agricultural journals in the pre-Civil War period. See *Valley Farmer*, 9:202-203 (July 1857), 12:11 (Jan. 1860), 14:35-36 (Feb. 1862); *Colman's Rural World*, 22:58 (Jan. 23, 1869), 25:73-80, 161 (June 4, Aug. 20, 1870), 34:113-120 (Mar. 24, 1881), 40:121 (Apr. 21, 1887), 50:97, 148, 160 (Apr. 1, May 13, 20, 1897).

⁵ *Colman's Rural World*, 25:161 (Aug. 20, 1870).

¹ This article was presented at the meeting of the Agricultural History Society and the Mississippi Valley Historical Association at Rock Island, Illinois, on Apr. 24, 1948. It utilizes data derived from the author's study, Norman J. Colman and *Colman's Rural World: A Study in Agricultural Leadership*, an unpublished Ph.D. dissertation completed at the University of Missouri in 1947.—Editor.

² *Ohio Cultivator* (Columbus, Ohio), 3:125 (Sept. 1, 1847), 5:40, 296 (Feb. 1, Oct. 1, 1849); *Valley Farmer* (St. Louis), 6:9 (Jan. 1854), 7:439 (Nov. 1855).

³ *Missouri State Times* (Jefferson City), Apr. 27, 1866; *Colman's Rural World* (St. Louis), 19:1, 299, 333 (Jan. 1, Oct. 1, Dec. 1, 1867). The *Journal of Agriculture* was merged with the *Missouri Ruralist* in 1921.

Like other agricultural periodicals, *Colman's Rural World and Valley Farmer* made a special effort to solicit correspondence and articles from readers, preferably practical farmers. Such contributions naturally came from the more enlightened and more progressive farmers, but they probably furnished the best means of convincing skeptics that agricultural improvement was a practical business. In order to convince suspicious farmers that improvements being advocated were not "humbug," the editors insisted that contributions be practical and plain. This policy was designed to popularize the *Rural World* with the farming public and to make it a clearinghouse of agricultural information, embodying the experiences of all the readers.⁶ In connection with and as a basis for communications to the journal, the editor urged his farmer patrons to make periodical experiments with various methods of culture, manure application, livestock feeding, and new crops, and to report the results so that other farmers might benefit from their experience. Efforts in this direction apparently met with some success, for Colman stated on one occasion that nine out of every ten articles found in farm journals were written by practical farmers, on another that his paper was made up almost exclusively of original material, and again that all regular writers for his journal were reared on the farm and wrote principally from experience and observation.⁷

To get a clear picture of the position of *Colman's Rural World* in Midwestern farm journalism during the latter half of the nineteenth century, it is necessary to view briefly the career of its editor and publisher, Norman J. Colman (1827-1911). Because of his influence in agricultural and public affairs, his paper possessed unusual prestige in its field. Colman, after a brief legal experience, rose rapidly as Missouri's leading advocate of agricultural reform. Besides serving as editor and publisher of his journal for more than half a century, he became an important nurseryman and experimenter in fruit growing, a substantial breeder of trotting horses, Poland China hogs, and Jersey cattle, and a promoter of organizations for the encouragement of many branches of scientific farming. He was the founder of the Missouri State Horticultural Society and a leader in two or

three other horticultural societies around Saint Louis, vice president representing Missouri of the American Pomological Society, president and for forty years a leading member of the Missouri State Board of Agriculture, member of the board of curators of the University of Missouri, an important figure in the early history of the Missouri College of Agriculture, and a leader in several other agricultural and livestock associations in Missouri and the Mississippi Valley. In addition, Colman played an active part in agricultural movements of a broader scope. He was probably more responsible than any other one man for the founding of the Missouri State Grange in 1870, and between 1889 and 1892 he was active in the Farmers' Alliance movement. He was also active for a time in Missouri politics, serving one term (1867-68) in the General Assembly and one term (1874-76) as Lieutenant Governor.⁸

Colman's position as a farm leader led to his appointment by President Grover Cleveland to the Commissionership of Agriculture in 1885, and when in 1889 the Department of Agriculture achieved cabinet status, he became its first Secretary. His part in establishing the system of federally subsidized experiment stations, embodied in the Hatch Act of 1887, furnishes perhaps his chief claim to eminence. These experiment stations, in conjunction with the Office of Experiment Stations and the Association of Agricultural Colleges and Experiment Stations, also formed largely through Colman's efforts, for the first time brought State and Federal agencies into harmonious co-operation. Although in size and in the amount of its appropriation the Department of Agriculture of 1889 was small when compared with modern expenditures, the period during which Colman served as Commissioner and Secretary marks one of the most significant transitions in its history.⁹

⁶ *Dictionary of American Biography*, 4:314 (New York, 1930); Floyd G. Summers, "Norman J. Colman, First Secretary of Agriculture," *Missouri Historical Review*, 19:404-408 (April 1925); *Colman's Rural World*, 25:140 (July 30, 1870), 39:105 (Apr. 8, 1886), 42:105, 145, 153 (Apr. 4, May 9, 16, 1889); Jonas Viles, *The University of Missouri, A Centennial History* (Columbia, Mo., 1939), 120.

⁹ Alfred C. True, *A History of Agricultural Experimentation and Research in the United States, 1607-1925* (U. S. Department of Agriculture, *Miscellaneous Publication 251*, Washington, 1937), 177; U. S. Office of Experiment Stations, *Experiment Station Record*, 25:701-705 (1911); Earle D. Ross, "The United States

⁶ *Ibid.*, 22:58 (Jan. 25, 1869).

⁷ *Valley Farmer*, 9:202-203 (July 1857), 12:11, 262 (Jan., Aug. 1860); *Colman's Rural World*, 25:73-90 (June 4, 1870), 34:92-120 (Mar. 24, 1881).

Partly because of Colman's increasing activities in public affairs, the *Rural World* went through a noticeable expansion following the Civil War. The staff was augmented, a full-time business manager was hired, and the paper began to attract an ever-increasing patronage from correspondents and advertisers.¹⁰ The editor published a special plea to the progressive farmers of the Midwest asking them to submit material to the journal. He promised to publish such material when it presented new information or valid points for discussion, but pointed out that publication did not necessarily indicate endorsement unless so stipulated in editorial remarks.¹¹

The *Rural World* always appealed to a limited class of advertisers, primarily those selling farm products or farm machinery. In addition to such typical advertisements as those concerning farm machinery, purebred livestock, various varieties of seeds and nursery stock, the journal often contained announcements of farms for sale, and in many such cases, Colman himself acted as an intermediary.¹²

The journal made a special effort to serve Midwestern and Southern farmers and livestock breeders in the distribution of improved stock. Many breeders employed the columns of the paper to find buyers, and those who wished to acquire breeding stock used the paper to locate the particular stock desired. Early in 1884, for example, a Texas dairy farmer wrote to ask Colman where he could buy a carload of good Jersey cows. This letter, when published in the *Rural World*, brought an immediate response and enabled the Texan to locate his cattle with a minimum of delay.¹³ J. Edwin Black, a livestock farmer of Bridgeport, Illinois, frequently advertised his purebred sheep and hogs through this journal. In October 1884, he wrote the editor that his advertisements in the *Rural World* were bringing a demand for breeding stock from all over the Midwest—from Minnesota to Texas and from Indiana to Kansas.¹⁴ Personal interest of members of the staff in the success of the journal's patrons

seems to have had considerable effect on its popularity as an advertising medium. The paper regularly announced the sales held each fall by most prominent Midwestern livestock breeders and advised farmers to take advantage of such opportunities to acquire good stock. A regular patron of Wilmington, Ohio, who frequently advertised his purebred hog sales in the *Rural World*, wrote the editor that of all the journals in which he advertised, the *Rural World* was the only one which sent a personal representative to his sale. Furthermore, he considered it the cheapest and most effective of all the journals in which he advertised.¹⁵

Though much of the paper's financial return came from advertising, the editors considered it to be the duty of every agricultural periodical to expose fraudulent advertising. Indeed, they felt that farmers needed special service in this respect, since no economic class was more easily imposed upon.¹⁶ As early as 1860 the old *Valley Farmer* had joined a number of eastern journals in exposing the alleged worthlessness of a fertilizer called superphosphate of lime, manufactured and highly advertised by James J. Mapes, of New Jersey, editor of the *Working Farmer*, published in New York. Several journals joined in denouncing Mapes after S. W. Johnson, professor of chemistry at Yale and chemist of the Connecticut Agricultural Society, had analyzed his product and declared it hardly worth the cost of transportation. Though there was much difference of opinion concerning the efficacy of superphosphate of lime, the editors unanimously condemned Mapes' practice of using his journal to advertise a product from which he reaped a large profit. There was also evidence that Mapes did not sell the same quality of fertilizer that he used on his own farm or for demonstration.¹⁷

¹⁰ *Ibid.*, 47:360 (Nov. 15, 1894).

¹¹ See Earl W. Hayter, "The Patent System and Agrarian Discontent, 1875-1888," *Mississippi Valley Historical Review*, 34:59 (June 1947), for a discussion of the farmers' vulnerability to "sharp" business practices in connection with another problem.

¹² *Valley Farmer*, 10:131-132 (May 1860); *Country Gentleman* (Albany, N. Y.), 1:340 (June 2, 1853), 14:368 (Dec. 8, 1859). People who visited Mapes' farm at Newark, New Jersey, however, were favorably impressed, and some considered him the outstanding agricultural experimenter in the country. See *Southern Cultivator* (Augusta, Ga.), 18:14-15 (Jan. 1860). See also *Dictionary of American Biography*, 12:264 (New

Department of Agriculture During the Commissioner-ship," *Agricultural History*, 20:129-143 (July 1946).

¹³ *Colman's Rural World*, 19:353, 362 (Dec. 1, 1867), 21:321 (Nov. 21, 1868).

¹⁴ *Ibid.*, 22:58 (Jan. 23, 1869).

¹⁵ *Ibid.*, 22:63, 77 (Jan. 23, 30, 1869).

¹⁶ *Ibid.*, 37:52 (Feb. 14, 1884).

¹⁷ *Ibid.*, 37:322 (Oct. 9, 1884).

Throughout the 1870s and 1880s, the *Rural World* carried many articles warning farmers against frauds and often pointed out specific instances. In 1889 the editors were particularly disturbed by the activities of W. G. Cavan, a New York dealer in purebred Berkshires, who frequently failed to ship the same quality of breeding stock he advertised, and often neglected to furnish a bona fide pedigree. On one occasion the paper forced Cavan to return \$75 to a Missouri farmer who had been deceived in this manner. When Cavan was finally apprehended at Buffalo, New York, and fined \$300 for defrauding farmers in that State, the *Rural World* claimed a large share of the credit, since it was the first to expose him.¹⁸ The paper also warned patrons to beware of an Ohio imposter who was selling "cholera proof" hogs, and often condemned vendors of patent stock medicine. "These fellows are treated with too much leniency by the press and are admitted to the advertising columns of too many papers," the editor declared on one occasion.¹⁹

During the seventies and eighties, the *Rural World* became deeply interested in promoting sheep husbandry and sorghums. The special "sheep department," edited by R. M. Bell of Brighton, Illinois, was a natural outgrowth of Colman's unflagging interest in sheep raising and of his belief that a large portion of the Midwest, particularly the more undulating lands, offered excellent opportunities in this branch of agriculture. For years the editor conducted an intensive campaign to interest Missouri farmers in sheep raising, one phase of which was an unsuccessful attempt to get an effective dog-tax law enacted by the legislature. This, he believed, would greatly reduce the number of sheep-killing dogs which roamed the country and often made sheep raising a hazardous business. When the Missouri Wool-Growers' Association was organized about 1880, the *Rural World* expressed hearty approval and gave it wide publicity.²⁰

York, 1933), where it is maintained that Mapes' superphosphate of lime was probably the first complete plant food among artificial fertilizers used in the United States. Other editors seem to have objected most vigorously to Mapes' unethical business and journalistic practices.

¹⁸ *Colman's Rural World*, 43:127 (Apr. 17, 1890).

¹⁹ *Ibid.*, 24:153 (Mar. 5, 1870), 42:297 (Sept. 19, 1889).

²⁰ *Ibid.*, 25:78-80 (June 4, 1870), 32:41-49, 251, 268 (Feb. 5, Aug. 13, 20, 1879), 34:113-120 (Apr. 4, 1881).

The emergence of *Colman's Rural World* as the chief promoter of sorghum, or Chinese sugar cane, is one of the most curious and interesting chapters in the journal's history. The plant apparently had been introduced into the United States in 1854, and Orange Judd of the *American Agriculturist*, its first enthusiastic promoter, had distributed nearly a million packages of seed in the hope that it would prove valuable as a source of sugar and as a forage crop for cattle.²¹ Colman's paper was at first skeptical of the new crop, viewing it as another of the fads by which American farmers so frequently allowed themselves to be victimized. However, when the sorghum plant assumed new importance because of the acute sugar shortage during the Civil War, the journal took the initiative in publicizing "reliable" information concerning the new crop.²² In the seventies and eighties sorghum raising became the center of widespread interest and agitation, with *Colman's Rural World* taking the lead in promoting experiments with the new crop. Colman took great pride in the fact that his was the only farm paper with a special "sorgo department," and the *Rural World* became the official organ for several cane growers' associations, including two of which Colman himself was president.²³

Promoters of the so-called Chinese sugar cane had three important objects in view: the production of syrup or molasses, forage for livestock, and ultimately large-scale manufacture of marketable sugar. The *Rural World* approved all three objectives, confidently predicting that experimentation with the plant would eventually result in a great sugar industry, making the United States independent of outside sources for this commodity.²⁴ Throughout the 1880s, particularly while the United States Department of Agriculture was carrying out its experiments in making sugar from sorghum cane at Rio Grande in New Jersey and at Fort Scott, Kansas, the journal

²¹ Demaree, *The American Agricultural Press*, 57; Lewis Cecil Gray, *History of Agriculture in the Southern United States to 1860* (Washington, 1933), 2:829.

²² *Valley Farmer*, 9:361-362 (Dec. 1857), 14:377 (Dec. 1862).

²³ *Colman's Rural World*, 34:92, 113 (Mar. 24, Apr. 14, 1881). *Colman's Rural World* was the official paper of the Mississippi Valley Cane Growers' Association, the Minnesota State Amber Cane Growers' Association, and the Illinois State Cane Growers' Association. See *Colman's Rural World*, 34:36 (Feb. 3, 1881).

²⁴ *Ibid.*, 38:345 (Oct. 29, 1885), 39:201-203, 242 (July 1, Aug. 5, 1886), 40:380 (Dec. 8, 1887).

remained steadfast in the belief that a method of making sugar from the plant would be perfected and made profitable. Only as this hope faded did the great enthusiasm over sorghum recede. Throughout its campaign, however, the *Rural World* pointed out that the new crop's potential value as cattle feed might far surpass its value for making sugar and molasses.²⁵

Undoubtedly the most important outgrowth of the sorghum agitation of the 1870s and 1880s was the addition of a valuable forage crop to Midwestern agriculture. This is particularly significant in view of the large number of sorghum crops that have subsequently been developed through hybridization, such as milo, sorgo, hegari, and several others.

Two other crops of current significance in Midwestern agriculture received special attention from the *Rural World* during the last twenty years of the nineteenth century. These were lespedeza, at that time usually called Japan clover, and the soybean. In 1887, in answer to an inquiry from a Maryland correspondent, the editor described lespedeza in some detail and stated that it had proved to be a valuable plant in the South. Though rarely cultivated, it often took possession of wastelands and worn-out fields, converting them into good pastures. At this time there was considerable doubt whether lespedeza could withstand the severe climate of the Midwest, and because of the general lack of knowledge concerning the plant, the journal urged farmers to experiment with it. The editor displayed keen interest in lespedeza because of its ability to grow on poor worn-out soil, declaring that it would be a godsend to the Midwest if it proved as effective as current observations indicated. He believed there was a good chance that experiments would demonstrate the plant's ability to reseed itself even in the Midwest.²⁶ In the nineties the journal published a series of letters from S. M. Tracy, director of the Mississippi Agricultural Experiment Station and a long-time contributor to the *Rural World*, describing the beneficial effects of lespedeza in certain regions of the South. Tracy declared that its ability to grow on poor soils and cover bare fields was well

known and that on better soils it grew tall enough to cut for hay.²⁷

Early in 1897 the paper began publishing a long series of articles by Robert C. Morris of Olney, Illinois, advocating the culture of soybeans. These articles recommended the cultivation of soybeans because it was believed that they would thrive where other legumes would not, that if properly managed they would rebuild soil fertility, and that, in addition, they made excellent feed for livestock. The writer contended that the only way to rebuild soils which had been depleted by constant grain cropping was to raise legumes, of which soybeans were the best for fields which would no longer grow clover, and to feed livestock on the ground.²⁸

As the nineteenth century advanced, the *Rural World* became increasingly concerned about the rapid depletion of soil fertility throughout the Midwest. Because much soil, which a half century before seemed incapable of exhaustion, by 1890 would no longer grow clover, editors of the paper were eagerly seeking and highly publicizing plants which would thrive on worn-out land. Even in the sixties, Colman's paper had warned farmers of approaching disaster unless they took immediate steps to counteract the effects of constant cropping with grain.²⁹ The journal's increasing concern with the problem of soil exhaustion is well illustrated by a long editorial in August 1870 entitled "Farmers, Don't Plow So Much." The editor declared that excessive plowing was the cardinal sin of western farmers. They planted corn and wheat until the fertile topsoil of the rolling lands was nearly washed away and the bottom lands were rendered as hard as city pavement. The editor maintained that he had witnessed fertile uplands, in a period of from six to ten years, become as sterile as the roadbed. He urged his readers, instead of raising so much grain, to sow more land to grass, cut more hay, raise more stock, and produce more butter, cheese, beef, and pork.³⁰

During the eighties, the *Rural World* devoted a large amount of its space to agitation for dairy and general stock farming. The editors argued that stock farming offered the best means of conserving the land and in the long run proved more profit-

²⁵ *Ibid.*, 41:1-8 (Jan. 1, 1888). See also Colman to Senator John J. Ingalls, Feb. 2, 1888, in Records of the Office of the Secretary of Agriculture, Press Copies of "Congressional" Letters Sent by the Commissioners of Agriculture, 10:91, in the National Archives, Washington, D. C.

²⁶ *Colman's Rural World*, 40:121 (Apr. 21, 1887).

²⁷ *Ibid.*, 50:17 (Jan. 21, 1897).

²⁸ *Ibid.*, 50:97, 148, 160, 176 (Apr. 1, May 13, 20, June 3, 1897).

²⁹ *Valley Farmer*, 14:1-3 (Jan. 1862).

³⁰ *Colman's Rural World*, 25:161 (Aug. 20, 1870).

able than grain. Special emphasis was placed upon establishing dairies, breeding better milk and beef cattle, improving pastures, and increasing hay production, especially red clover. "Why it is", the editor exclaimed, "that farmers will, year after year, go on cropping their farms to death, and reaping very meager returns, till they, or their children, are driven into other lines of business, while the old homestead is reduced to all but a desert, is difficult to determine."³¹ Even farmers with very moderate means, he declared, could make a start toward altering the system. It was not necessary for a farmer who wished to turn to dairying to have a fine herd of Jerseys or Holsteins, or for one who wished to produce beef to begin with full-blooded Angus, Herefords, or Shorthorns. The poor farmer could begin by giving increased attention to what he had and could improve his herd as rapidly as his means permitted. The important object was to shift the emphasis from soil exploitation to a system which would conserve the land and at the same time furnish farmers a steady income.³²

The *Rural World* often grew impatient with the farmers' failure to keep abreast of the conservation problem. In 1886 one of its editors estimated that three-fourths of the manure on the farms in Missouri was not being utilized. This constituted an inexcusable waste, and though the subject had been discussed until it was time-worn, farmers persisted in their old habits.³³ Ten years later the journal declared that Missouri farmers were still wasting one-half their manure and that the loss was costing them about \$75,000,000 annually. The paper frequently called attention to bulletins issued by the Missouri Agricultural Experiment Station, which had resulted from a long series of experiments in the use of manure in land rehabilitation. Readers were informed that such bulletins would be mailed to any address free of charge and were urged to send for copies.³⁴

Toward the end of the century, an increased interest in alfalfa became evident. Since the editor received numerous requests for information regarding the culture of this legume, he printed careful and detailed instructions respecting choice of soil, care of the young crop, and the making of hay. If properly managed, he maintained,

alfalfa would yield two or three times as much hay as red clover. The *Rural World*, however, would not recommend the general sowing of alfalfa despite its excellence for livestock feed and soil building. This was because farmers as a rule refused to exercise sufficient care in preparing the soil, keeping down weeds, and in other ways protecting the young crop. They also became impatient because immediate results did not come up to their expectations, and, as a result, they tended to disparage the plant without giving it a fair trial. This frequently happened in spite of the editor's repeated warnings that alfalfa could not be fully appreciated until the second or third season after it was sown.³⁵

During the late nineties, the journal also carried on a vigorous campaign to interest farmers in commercial fertilizers. Heretofore, the paper had held that, except in special cases, Midwestern farmers could get along without these products if they rotated crops properly and utilized the manure produced on their farms. By this time, however, the editors felt that soil exploitation had reached a stage where more radical measures were necessary to save the land and keep it productive. They informed farmers that, largely through the work of the State experiment stations, it had become commonly recognized that most exhausted soils needed to be replenished with nitrogen and potash. Application of these elements through properly mixed composite fertilizers was said to offer the only practicable way out of the dilemma facing a large proportion of Midwestern farmers. Purchasers of fertilizer, however, needed to be protected against fraud. Though Missouri's law, which required that each bag of fertilizer carry a tag giving a guaranteed analysis of its contents furnished the buyer satisfactory protection, State laws were not uniform. The paper advocated a general law to regulate manufacturers of fertilizer in all the States.³⁶

During this period the journal performed a substantial service for many of its readers by acting as an intermediary between them and the State experiment station at Columbia, Missouri. The paper accepted questions, descriptions of land, and soil samples, forwarded these to the station, and then published its answers. Henry J. Waters, dean of the College of Agriculture and director of the experiment station at Columbia, often an-

³¹ *Ibid.*, 37:297 (Sept. 18, 1884).

³² *Ibid.*

³³ *Ibid.*, 39:28 (Jan. 28, 1886).

³⁴ *Ibid.*, 50:57 (Feb. 25, 1897).

³⁵ *Ibid.*, 50:41 (Feb. 11, 1897).

³⁶ *Ibid.*, 50:233 (July 29, 1897).

swered such inquiries through the paper, thus making information available to many farmers. For one patron of the *Rural World* who wished to get an old field seeded in pasture, Waters outlined in great detail two or three plans for establishing a permanent pasture on land such as the farmer described.³⁷ Cooperation of this kind between the *Rural World* and the State experiment station occurred frequently around the turn of the century and no doubt did much to popularize both the station and the agricultural college.³⁸

In view of Colman's position on the Missouri State Board of Agriculture and on the board of curators and the board of visitors of the University of Missouri, it is only natural that his journal, as a firm supporter of these two institutions, attempted to popularize them with the farmers of the State.³⁹ During the late 1860s when a bitter struggle was going on in the legislature concerning the location for a college of agriculture in Missouri, the *Rural World* strongly advocated its location at Columbia in connection with the university, already an established institution. It was the journal's main contention that the college could become firmly established much more quickly if it were connected with a thriving concern than if it were set up as a separate institution. The *Rural World* published a series of extensive articles outlining the important advantages of attaching agricultural colleges to existing universities. Primary among these, of course, were the great savings in initial building costs, available staff and equipment for teaching the basic sciences, and the previously established libraries, all of which would enable the new colleges to gain a quick start.⁴⁰

During the years following the founding of the College of Agriculture at Columbia in 1870, Colman's *Rural World* carried on a constant campaign to popularize the new institution and to secure adequate public support for it and the Board of Agriculture.⁴¹ Farmers' institutes, the forerunner of agricultural extension work, which became a

joint enterprise of the Board of Agriculture and the College of Agriculture, were strongly advocated by the editor as a means of bringing farmers and the agricultural school together. It was largely as a result of Colman's long period of agitation, begun in 1869, that institutes were inaugurated in Missouri in the fall of 1883 and had become extremely popular by 1886. The *Rural World* gave extensive publicity to the meetings and boasted that it was represented at nearly every institute held in the State. Colman himself, as well as other members of the paper's staff, often took an active part in the meetings, and sometimes led the discussions, particularly between 1889 and 1891.⁴²

Since the greatest handicap to farmers' institutes in Missouri was the legislature's stubborn refusal to grant the Board of Agriculture sufficient funds, Colman's *Rural World* frequently criticized the assembly's short-sighted policy and insisted that the State should appropriate at least \$5,000 a year for institute work alone. The journal pointed out on numerous occasions that money spent in this manner would be returned many times over to farmers, and through them to the State. In an attempt to spur the legislators on, the paper frequently drew very unflattering comparisons between Missouri's appropriations for this work and those of neighboring States, particularly Illinois and Wisconsin.⁴³ The *Rural World* never relaxed its efforts to obtain adequate support for the Board of Agriculture and the agricultural college, or to urge that their functions be rapidly expanded. Colman always insisted that the board had been entrusted with important work that no other body in the State could perform; therefore it should be encouraged to perform its functions well. Instead of viewing the situation realistically, he maintained, the legislature was failing in its duty to the agricultural interests of the State.⁴⁴

As the years passed the relationship between Colman's *Rural World* and the Missouri College of Agriculture grew closer and ever more friendly. When the school's practical experiments in crop

³⁷ *Ibid.*, 50:281 (Sept. 9, 1897).

³⁸ *Ibid.*, and 51:25, 280, 281, 288, 291 (Jan. 27, Sept. 1, 8, 15, 1898).

³⁹ See *ibid.*, 39:105 (Apr. 8, 1886), 42:105 (Apr. 4, 1889), for examples of the journal's attitude toward scientific agriculture and agricultural education.

⁴⁰ *Ibid.*, 19:179 (June 13, 1867).

⁴¹ *Ibid.*, 25:78 (June 4, 1870), 37:212 (July 3, 1884); Viles, *The University of Missouri*, 159-164, 297-305.

⁴² Colman's *Rural World*, 36:4 (Aug. 2, 1883), 39:164 (May 27, 1886), 42:25, 185 (Jan. 24, June 13, 1889), 43:409 (Dec. 25, 1890), 44:121 (Apr. 16, 1891); Viles, *The University of Missouri*, 302.

⁴³ Colman's *Rural World*, 39:164 (May 27, 1886), 42:25, 105 (Apr. 4, June 24, 1889).

⁴⁴ *Ibid.*, 42:25, 89, 281 (Jan. 24, Mar. 21, Sept. 5, 1889), 43:289, 370 (Sept. 11, Nov. 20, 1890).

rotation and livestock feeding began to show results about 1884, the journal gave them enthusiastic approval and wide publicity. Colman often visited Columbia and inspected the college farm, which he felt was gradually emerging as the experimental plant of which he had long dreamed.⁴⁶

When the dean of the college and the president of the university became involved in a bitter dispute with members of the legislature and of the board of curators of the university in 1889, the *Rural World* generally supported the college officials and vigorously denounced those persons who, it believed, were damaging the reputation of the school in an attempt to injure their personal or political enemies. The paper was particularly harsh with the leader of the opposition to the dean and the president in the legislature, classifying him as an unscrupulous demagogue who had no understanding of scientific agriculture or of agricultural education. The journal never wavered in its contention that the dean had been unjustly condemned and that his work at the college had been of the highest order, but when he was dismissed, its faithful support of the school was continued.⁴⁶ Except for occasional criticisms of the university for not affording staff members greater tenure and for hiring "a fat politician who knows nothing about farming" as superintendent of the college farm, this support was almost unqualified. With the arrival in the early 1890s of Dean Henry J. Waters, under whose leadership the agricultural college first made substantial and sustained progress, a closer relationship became clearly evident. The journal had nothing but praise for the college which its editor had long endeavored to make the most popular educational institution in the State. Waters, members of his staff, and members of the Board of Agriculture were frequent visitors at the office of the *Rural World*, and the paper often published letters from Dean Waters and President Jesse of the University. Short histories of the agricultural school and pictures of the campus and farm, showing students at work pruning fruit trees and performing other such tasks, also appeared frequently in the journal.⁴⁷

⁴⁶ *Ibid.*, 37:121, 178, 212 (Apr. 17, June 5, July 3, 1884).

⁴⁶ *Ibid.*, 42:25, 33, 65, 73, 89, 177, 257, 274, 282 (Jan. 24, 31, Feb. 28, Mar. 7, 21, June 6, Aug. 15, 22, Sept. 5, 1889).

⁴⁷ *Ibid.*, 47:225 (July 18, 1895), 50:385 (Dec. 9, 1897), 51:288, 291 (Sept. 1, 8, 1898).

In 1897 the *Rural World* cooperated wholeheartedly with Waters, John R. Rippey, secretary of the Board of Agriculture, John R. Kirk, State Superintendent of Public Schools, and President R. H. Jesse of the University in an effort to introduce more agricultural education into the public schools. Waters wrote several articles for the journal, advocating this movement and explaining how the agricultural college had initiated it by offering summer courses for public school teachers in horticulture, entomology, agricultural chemistry, shop work, and drawing. The *Rural World* naturally greeted this policy with great satisfaction, since Colman had been advocating something of the sort for more than thirty years. As early as 1857 he had advocated furnishing rural school libraries with books on agriculture, and at various times he had declared that one great difficulty in the way of the success of agricultural schools in the United States was the failure to use the elementary schools as auxiliaries.⁴⁸ He thought instruction in the elements of agricultural education should begin in the common schools, especially in those where farmers' sons and daughters made up the bulk of attendance. In addition to Colman, Levi Chubbuck, field agent and associate editor of the *Rural World*, was also active in this work. Between 1889 and 1895, while he was secretary of the Board of Agriculture, Chubbuck had attempted to get such a project started.⁴⁹

Despite the fact that *Colman's Rural World*, like most farm journals, was generally opposed to printing articles on controversial political issues, it sometimes did depart from the established practice of dealing only with problems of practical and scientific agriculture.⁵⁰ The paper, for instance, was always a bitter opponent of protective tariffs, which the editor considered an instrument of class

⁴⁸ *Ibid.*, 36:4 (July 5, 1883), 50:233 (July 29, 1897); *Valley Farmer*, 9:224 (July 1857).

⁴⁹ *Colman's Rural World*, 50:257 (Aug. 19, 1897). Chubbuck was a graduate of the Missouri College of Agriculture and also did some postgraduate work there. He was superintendent of the college farm for two years. He worked for the *Rural World* the four years Colman was in Washington. He served as secretary of the State Board of Agriculture and as secretary of the Missouri State Dairymen's Association. About 1898 he returned to the *Rural World* as an associate editor.

⁵⁰ For the discussion of this aversion of agricultural journalists to political and other controversial questions, see Demaree, *The American Agricultural Press*, 34, 78-79, 94, 362.

and sectional discrimination. Editorials declared that all sections of the country were suffering from the paralyzing effects of the high tariff, but that upon no section did it bear so heavily as upon the agricultural west. The journal consistently maintained that the protective tariff was an unjust tax upon labor, benefiting only the big capitalists, and that it was largely responsible for the agricultural depression of the late sixties and the seventies.⁵¹

The journal also expressed its views on the money question and the growing power of capital, issues which it considered of vital interest to farmers of the Midwest. In 1874 the *Rural World* came out strongly in favor of the free coinage of silver, government paper money, and of abolishing the national bank system. The money system based on gold and national bank notes, along with protective tariffs, was condemned as favoring large capitalists and placing an unjust burden upon the masses of the people who had to pay the taxes.⁵² By about 1880 the power of concentrated capital had become particularly dangerous in the United States, the editor believed, and was permitting its owners or organizers to make laws favoring their own interest.⁵³

In 1870 *Colman's Rural World* became one of the strongest supporters of the Patrons of Husbandry, or National Grange, in the Midwest, and from that date until 1875 was its official organ in Missouri. In 1880 the *Rural World* again became the official paper of the Missouri Grange, and, as part of an agreement made with that order, reduced its subscription price from \$1.50 to \$1.00 a year. A few years later the publisher made an arrangement by which subscribers received both *Grange News*, organ of the Missouri and Illinois State Granges, and *Colman's Rural World* for only \$1.40 a year. Despite the decline of the Grange after the 1870s, the *Rural World* remained a staunch friend of the organization, declaring that despite its failure to remain strong, it rendered a great service by making farmers group conscious and more aware of the problems that confronted them.⁵⁴

⁵¹ *Colman's Rural World*, 23:324 (Nov. 20, 1869), 24:2, 129 (Jan. 1, Feb. 26, 1870), 25:113 (July 9, 1870).

⁵² *Ibid.*, 32:248, 268 (Aug. 6, 20, 1879).

⁵³ *Ibid.*, and 34:60 (Feb. 24, 1881).

⁵⁴ Alma Beatrice Wilkinson, *The Granger Movement in Missouri* (unpublished master's thesis, 1926, University of Missouri Library), 35-60; *Colman's Rural World*, 25:140, 164, 180, 185 (July 30, Aug. 20, Sept. 3, 10, 1870). When Oliver H. Kelley, secretary of the

In view of its previous stand regarding protective tariffs, greenbacks, free silver, and concentrated capital, it was only natural that the *Rural World* should become a strong supporter of the Alliance movement about the time Colman retired as Secretary of Agriculture. The journal had become convinced by April 1889, that the only salvation of the farmers, who it maintained were being deprived of their just share of the Nation's wealth, lay in "one united, systematic organization [of farmers], demanding a protection of their rights and interests." A little later the paper advocated consolidation of the Northern and Southern Alliances, and also approved, at least tentatively, the much debated proposal to affiliate the Knights of Labor with the Alliance. The *Rural World* contended that corporation representatives would always be able to block progressive legislation "until labor, on farm and in shop, elects to legislative positions only such men as are pledged to serve the people and not the corporations."⁵⁵ From late in 1889 to about May 1891, the journal published a regular column of Missouri Alliance news, and Colman himself was extremely active in the order. The paper continued its active support of the Alliance until that organization decided to form the Populist Party.⁵⁶

Though the *Rural World* cooled toward the Alliance because of the formation of a third party, it continued to comment occasionally on broad

National Grange, visited Missouri in August 1870 to establish a branch of the order there, Colman offered him the hospitality of his home and defrayed all expenses of his trip to Missouri. Wilkinson, *The Granger Movement in Missouri*, 32-33.

⁵⁵ *Colman's Rural World*, 42:105, 145, 153, 177, 288, 345, 352 (Apr. 4, May 9, 16, June 6, Sept. 5, Oct. 31, 1889).

⁵⁶ *Ibid.*, 44:104 (Mar. 26, 1891). It is interesting to note that Colman approved, at least in principle, the Subtreasury Plan advanced by C. W. Macune, chairman of the executive committee of the Texas Alliance and editor of the *National Economist* at Washington, D. C., and approved by a convention of the Farmers' Alliance at St. Louis, Missouri, in December 1889. This unique scheme called for the abolition of the system of using certain banks as United States depositories and substituting subtreasury offices which would issue legal-tender paper money on carefully stored agricultural products, such as wheat, corn, oats, barley, rye, rice, tobacco, cotton, wool, and sugar. See John D. Hicks, *The Populist Revolt* (Minneapolis, 1931), 119-124, 186-202.

economic problems. The journal advocated the graduated income tax, supported striking laborers in Chicago and Pittsburgh, and repeatedly warned farmers of the growing and ominous threat of tenancy in the United States. Between 1894 and 1898 the paper carried on an extensive discussion of Henry George's single tax theory, and for a while it employed a devoted follower of George to defend the plan against attacks by various of the journal's contributors.⁵⁷

Articles of this nature, however, grew progressively less frequent, and during the late nineties the *Rural World* once again turned almost exclusively to practical and scientific agriculture. Though it always displayed an active interest in broad political, social, and economic issues and

⁵⁷ *Colman's Rural World*, 47:1, 136, 161, 261 (Jan. 4, Apr. 26, May 24, Sept. 5, 1894), 50:241, 298, 304 (Aug. 5, Sept. 23, 30, 1897).

took a firm stand on those which it considered of vital importance to the agricultural west, it never permitted its concern with these to overshadow the journal's principal functions as a farm periodical. The general attitude of the paper is shown in an editorial printed late in 1890 which expressed the fear that farmers might lose sight of the all-important matters of "what the farmer could do better" in the way of tilling the soil, cultivating and marketing his crops, and making the most of the agricultural resources of the country.⁵⁸ The writer believed that it was important for farmers to keep themselves well informed on broad economic and political questions, but that they must not forget the fundamental principles which determined all successful farm operations. He reminded them that their first duty and necessity was to be good scientific farmers.

⁵⁸ *Ibid.*, 43:401 (Dec. 18, 1890).

FREDERICK JACKSON TURNER'S ADDRESS ON EDUCATION IN A UNITED STATES WITHOUT FREE LANDS

Edited by FULMER MOOD

University of Wisconsin

INTRODUCTION

Frederick Jackson Turner was graduated from the high school at Portage, Wisconsin, in June 1878. At that time the town's school population was small enough so that both high school and some of the upper grammar grades were accommodated in one stern and uncompromising two-story brick structure. At the end of 1895 a new high school building, of modern design and construction, was completed. On January 1, 1896 this building was dedicated in the presence of about four hundred citizens. The dedicatory ceremonies included music and brief remarks by various leading townsmen. The principal address of the day was delivered by the most distinguished alumnus of the high school who was within easy reach: Fred Turner, as his fellow townfolk always remembered him. Turner was close at hand and often visited Portage, coming over from Madison to see his parents who resided on Franklin Street near the school.

Turner's dedicatory address was printed the following day in the Portage *Daily Register*. This is the only form in which it is known today. The

historian gave it no specific title when it was printed in the columns of the home-town newspaper and never cited it in any of his subsequent writings. Up till now it has been a lost piece. For purposes of bibliographical reference in the future it has seemed best to settle on a name for the address. The title decided upon is: Education in a United States without Free Lands. The text as printed here is based upon a photostat of the address as published originally in the Portage newspaper. A few printer's errors and related inaccuracies have been corrected or eliminated.¹

Turner's celebrated essay of 1893 looked backward and drew conclusions from the historic experience of the American people. In the present address the speaker based himself on the premise that one era of American history had come to an end, and that another, a different one, had com-

¹ Mrs. Ruth Swenson, librarian of the Portage Free Library, has been kind enough to compare the typescript copy prepared by the editor of *Agricultural History* with the original text in the Portage *Daily Register*, Jan. 2, 1896.

menced. This new era was to be characterized by the absence of free land. How were Americans to equip themselves for survival in this novel oncoming age? The address gives Turner's answer to this principal question.

Professor Merle Curti obligingly consented to look over the text of the address, and from his comments thereon the following observations are taken. This address, he states, displays Turner's readiness to apply his interpretation of American history to an *ad hoc* situation. Here we see the historian using his knowledge to guide social action in the community of Portage. Turner was primarily concerned with the social implications of public education on the high school level. Here he moved in the tradition of Horace Mann and spoke the same language that John Dewey had already begun to use. Like many other social Darwinists of the age, Turner emphasized the role of intelligence in social evolution. Organized intelligence above the common school and below the university is necessary for the proper adjustment of mankind to the ceaseless struggle for existence. The high school must help to prepare graduates with an effective and usable knowledge of the social studies; these possess a utilitarian function in our social order and are instruments of adjustment in the strife of evolution. "Turner wanted the high school to do for the hinterland of Portage—for the larger Portage community—what the University was doing for the State; he wanted it to be a community center, a social and intellectual force. This notion is especially significant. Insofar as I know, he was breaking new ground here, for the idea of the modern community high school was hardly envisioned even by the most advanced educational leaders in 1896. In 1898-99 Dewey was to do something with this concept, and in *Democracy and Education* (1916) he was to refine the concept."²

With these introductory remarks one makes an end of exegesis. Now let the reader turn to the address itself, observing as he reads the extent to which a prediction based upon a historical analysis made in 1896 has been borne out in the course of half a century.

THE ADDRESS

Thomas Jefferson, the foremost advocate of the rule of the people in his time, declared: "If a nation

² The editor desires to thank Professor Merle Curti for his penetrating and instructive comments which, as printed in conjunction with the text, enhance its value and contribute markedly to its interpretation.

expects to be ignorant and free in a state of civilization, it expects what never was and never will be." Jefferson realized that democracy meant more than the right of a people to rule itself. Unless democracy was to obstruct progress, destroy the accumulated gains of civilization, and ultimately to fall beneath the ruin it had wrought, democracy, he saw, must train itself for the exercise of its powers.

Acting in consonance with this idea, Jefferson not only broke the power of the aristocracy of Virginia; at the same time he proposed measures of popular education, whereby the masses would "be qualified to understand their rights, to maintain them, and to exercise with intelligence their parts in self government." The educational system which he advocated included common schools, academies, and a university. He was not able to carry out his scheme in its completeness; but he did create the noble University of Virginia, and as president of the United States he urged that the general government should found a national university.

Thus the prophet of our early democracy saw the importance of education in a republic. "If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be!" Washington too, uttered the same sentiments, in these words: "In proportion as the structure of a government gives force to public opinion, it is necessary that public opinion should be enlightened."

But in the days of Washington and Jefferson the danger of an ignorant democracy was not a serious one. The dangers they apprehended were not very real. No conspiracy to overthrow popular government could have gained serious headway. Moreover, the democracy of that day was a limited one; it did not include all members of the community. In the south the negro did not vote; in the north great respect was paid to leading families, and throughout the union a majority of the states imposed a property qualification on the franchise, whereby large portions of the masses were excluded from the right to vote. But there existed a more effective check upon dangers arising from the rule of the people than either of these facts.

Early American democracy could afford to rule wastefully, and ignorantly, and yet the results were not very serious. Americans had a safety valve for social danger, a bank account on which they might continually draw to meet losses. This was the vast unoccupied domain that stretched from the borders of the settled area to the Pacific ocean. Endowed

with such untold natural resources, with a continental sweep of fertile lands, forests, pasture grounds and mines, democracy could make mistakes and never be aware of its errors. No wonder Americans exulted that Uncle Sam was rich enough to give us all a farm. No wonder that they scorned to study methods of government and regarded office as the spoils of political war, and believed that in America the ability to govern came by instinct. Thus the early American democracy, when it did achieve command in the days of Andrew Jackson, was fashioned under conditions of free land and complete mobility of labor. The poor boy could go west and grow up with the country. For generations America was another name for opportunity. No grave social problems could exist while the wilderness at the edge of civilization opened wide its portals to all who were oppressed, to all who with strong arms and stout heart desired to hew out a home and a career for themselves. Here was an opportunity for social development continually to begin over again, wherever society gave signs of breaking into classes. Here was a magic fountain of youth in which America continually bathed and was rejuvenated. Out of this freedom of opportunity came the self-made man, the man who with quick eye to the main chance, and with coarse, courageous strength, seized his own.

Such a nation might make mistakes, and could make them without gravely feeling them. It cared not for European history, political systems, or industrial ideas, for these were foreign to it, and seemed to offer no advantages to this American world so unlike that across the Atlantic. The United States gave itself to the task of developing its vast domain, and almost forgot the existence of Europe. The nation became what John Randolph called it, "the mammoth of the American forest."

At last this land animal has toiled across the continent, and looks on the waters of the Pacific ocean. Behind him lies a changed world. Where were dense forests and wild wastes of prairie, are waving grain fields, innumerable hamlets, and busy cities; the whirr of the mill wheels sounds in the place where sounded the roar of the cataract. The public lands are taken up. Uncle Sam is no longer rich enough to give us all a farm. Ever since 1790 the census maps had shown for each decade the line of frontier settlement, but in 1890 the superintendent announced that there was no longer a frontier of settlement. The con-

continent is crossed; the wilderness is won; America is transformed.

We find conditions of complex life, inequalities of wealth, and dense settlement comparable to those of Europe. Its problems become our problems. We have our labor troubles, as Europe has. We study her methods of municipal government to adapt them to our cities. We cease to be an isolated nation, and we find ourselves again taking to the water, building a navy and meeting European competition. We have our fisheries question, our Hawaiian question, our interoceanic canal question, our Samoan question, our Cuban question, and but yesterday the secretary of state threw our gauntlet in the face of England, Germany and France, and declared that the United States is practically sovereign in both Americas and that its fiat is law. In a word, ladies and gentlemen, American democracy has entered on a new career.

It can no longer entrust its destinies to untrained men with safety. In domestic affairs the struggle for existence becomes intense; Labor fronts Capital; in the homogeneous American society of our fathers, fissures begin to open between classes, fissures that may widen into chasms. In place of the old equalities of wealth we have Vanderbilt's country home in the woods of North Carolina, costing \$6,000,000, circled with forty miles of pleasure grounds, on the one side, and on the other squalid tenement houses where children never see the flowers. In the relations of America with other nations, the old recklessness in choosing public servants will no longer do. For our congressmen, our administrators, we need men trained in the widest knowledge of political science. We need thoughtful, intelligent constituencies. If we do not have them we shall quickly learn the lesson of the survival of the fittest.

Certainly it needs no prophet to point out that if education was important to the old, comfortable, American democracy, it is now, with our influx of emigrants, our domestic dangers, and our critical foreign relations, a matter of life and death. Knowledge is always power, but to a democracy it is the condition of existence. "Remember," said Bacon, "that the learning of the few is despotism—the learning of the many is liberty, and that intelligent and principled liberty is fame, wisdom, and power." These are golden words; they should be written in every legislative hall in the land. In the principle of popular education

is, perhaps, the greatest hope of the civic salvation of the American people.

Let us enquire then more particularly just what part public education plays in the conservation of democracy, and this will enable us to see the importance of the high school in the educational system. In the first place the public school acts as a cement to keep the various classes together. Here wealth and poverty sit side by side; study from the same books; and learn to understand each other. The democracy of the school room is complete and the aristocracy of intellect is the only privileged class recognized. No one can estimate the importance of this practical contact between classes. If the people ever break it down by crying out against expenditures necessary to make the public schools as good as the best, if public schools become weakened and fall into the hands of the poor alone, the gravest of blows will have been struck at peaceful democracy.

Again public education is essential to a democracy in order that the people may be enabled to rule wisely. When the question of extending the suffrage was being agitated in the second decade of this century, one of the fears most commonly expressed was that the pressure of wealth under intelligent direction would enable the unscrupulous to control the laboring men. The danger anticipated from the influence of great moneyed interests in political affairs was not a fanciful one, and if wealth were to monopolize education, the populace will certainly suffer. On the other hand an ignorant populace is a pliant tool in the hands of the unscrupulous demagogue, ready to tear down, unable to build up, and falling like a blind Sampson beneath the ruins of the temple of state.

In the third place a democracy needs public education, because where competition is sharp and the struggle for existence keen, we need to husband all our resources; we must know how to use them well. Our schools should include studies not now a part of them, studies that shall make more intelligent farmers, by teaching more scientific and economical modes of agriculture and farm management; studies that shall foster manual skill. Our education must be framed for the farmer and the artisan as well as for the business and the professional man.

And in the next place American democracy requires that this same education, which is useful

for promoting the industrial power of the individual, should be applied also to the affairs of the nation. With the increasing complexity of social and industrial relations we can less and less afford untrained legislation on such important topics as the tariff, currency, and industrial relations. We must have an intelligent democracy capable of choosing wise leaders and of understanding their utterances.

We must have an educated democracy capable of grappling with the conditions arising from our changed foreign relations. We must have men who know European and South American history, who understand the political institutions and forces at work there, who understand international law. We must have men who can wield the whole energies of the state most efficiently and forcibly, if we would win honorable peace, and opportunity for this people to pursue the path of national development.

But finally, in a democracy, we need education as a means of life, even more than as a means of livelihood. It ought to come into all our homes, widening the horizon, opening to the common man the knowledge of the best that has been done and thought in the world, unrolling to him the record of the ages gone by with marvelous march of events, making him see life as an unfolding from the past, from which it cannot break loose, spreading before him nature's infinite book of secrecy, enabling him to read in the common life about him the wonderful lessons of science. When such elements of culture are brought down from the few to the many, a new day will have dawned for democracy.

Now let us ask what educational instrumentality is best qualified to meet these requirements in the training of youth in a democracy. At the outset it would seem obvious that many, if not all, of the advantages of education, for democracy at least, would be lost if this education were relinquished into private endowments. Wealth would monopolize, or at least direct, the higher education, and we should have all the evils of class opposition and of an ignorant populace led by ignorance or demagoguery.

If we are limited therefore to the public educational system, let us consider which portion of the system is best suited to disseminate education among the masses. It has been estimated that taking the count as a whole, three-fourths of the students who enter in the primary grades cease

school life at eleven years of age, and that nineteen out of twenty do not enter the high school. If this estimate be even remotely close to the fact, it is seen that more attention should be paid in our elementary schools to the studies that promote good and intelligent citizenship. But it would be hopeless to do much more than equip such young students with the ability to read and write and reckon, to kindle right aspirations, and to awaken interest in the child mind. What can be done, should be done, but, after all, democracy can not be rightly equipped for defense through the work of the elementary schools.

Turning to the university we find it a matter of congratulation that those who enter the institution represent all classes, and are able to bring back to the service of the people the results of the highest training. The importance of such institutions cannot be ever estimated. The university fosters the search for pure truth; it aims not merely [at] knowledge of the time, but to widen that knowledge, to add new truths by investigation, to teach what is the best, and so it reacts on the whole educational system. It is the educational work shop, the intellectual observatory. It sends teachers to the high schools, teachers who have caught the inspiration and the insight of university ideals and methods. Its graduates mingle with the citizens of the state and thus extend the advantages of the university. Its publications, its extension lectures, its agricultural institutes spread this influence still more widely. It is a training school for just that kind of political and economic knowledge that the new conditions demand. The University of Wisconsin comes closer to the people than does any other university in the world.

But as the youthfulness of the pupils in the elementary schools makes it difficult for them to exert a determining influence upon the development of American democracy so the fewness of the numbers of those that attend the higher institutions of learning, such as the university and the normal schools, places a check upon their direct influence on the great mass of the people. There is needed a school, which takes from the primary grades their best pupils, and brings them under the influence of men trained in these higher institutions. Such a school would contain pupils who had mastered the elements of education, and who were sufficiently advanced to hear and profit by the words of the best writers and thinkers.

This is the foundation of the high school. It is the clearing house of the American school system, the receiving and disseminating center of education. The first free high schools were founded at the very time when America passed definitely into the hands of the common people, at the close of the first quarter of the present century. They have grown with the growth of democracy. It is estimated that five-eighths of the high school pupils of the country are children of the laboring classes. This percentage ought to be greatly increased.

But even as it is, the function of the high school as "a discoverer of talent and genius," as it has been called, is very clear. Here the son of the wielder of the pick axe and the spade as well as the son of the banker or broker, tests his intellectual power, and is encouraged to continue his career to the highest institutions if he has ability and ambition. The high school multiplies the nation's chances for getting the best for the public service. It helps to break down social barriers, and to keep open the doors of preferment to poor as to rich. It is a feeder to the university. But its main purpose is to send the boy and girl out into active life, equipped with something more than the rudiments of education. As the great distributing center for ideas to the young, its place in our educational system is of profound importance. That this importance is recognized may be gathered from the fact that one half the state constitutions specify the high school as objects of legislation and general interest.

Now, if the high school holds this important relation to the community, we may enquire how it may be made to fulfill its mission more completely.

In the first place we should give more attention there to the subjects that make for good citizenship, to history, and to the creation of the historical modes of thought, for these train the judgment and cultivate progressive conservatism; to the study of government, not only the constitution of the United States as it exists on paper, but to the actual workings of the machine (as in the nominating conventions, and in the process of congressional legislation by speaker and committees). Nor should we limit the study to our constitution; the pupil ought to know something of the governmental machinery of other nations. He should be taught to read and understand the daily press in its reports of congress, of the market,

of contemporary European history. The high school student should also be given a training in economics whether by formal text book, or in connection with his historical and political studies. He should know something of the financial and industrial questions of the time. In short greater emphasis should be laid on the studies that qualify men to make right returns for the bounty of the state, by giving to the state more intelligent service.

And lastly, the influence of the high school should be enlarged by high school extension. It should spread its influence throughout the community, and the surrounding country district. It may do this in many ways. In the first place it should make its work so valuable and so attractive as to attract more pupils from the ward schools and from the country districts. This room should be too small to hold its members. In the next place each high school in our smaller cities should have a large and carefully selected library, open for consultation, under certain restrictions, to the whole community. Here should be not only books, but current magazines, newspapers and public documents. A small but well chosen collection of photographs of works of art and foreign architecture might well be added at a moderate cost. A good library would do more to keep pupils at the high school and to multiply its power than any other one thing except the good teacher.

Another feature of high school extension should be the promotion of clubs which should have their home here. The high school hall is the proper place for literary clubs, travel clubs, clubs to debate governmental measures, and clubs to discuss industrial questions. Such clubs centering

in the high school would not only stimulate the intellectual interests of the whole community, they would also react on the pupils of the high school and make them see how closely their own work is related to life. When pupils begin to see a connection between their studies and the busy activities of the outside world, the effect is marvelous.

This hall should also be made use of in securing educational lectures, lectures not only from outsiders, but lectures in the line of the pupil's study by Portage men and women who have given particular attention to some line of work. In a word, ladies and gentlemen, this building should be the intellectual center of your city. It should be a harmonizing, stimulating, enriching force in your midst. It should reach out to every family in the city. "Remember that the learning of the few is depotism, the learning of the many is liberty and that intelligent and principled liberty is fame and wisdom and power." By working with such ideals you shall make this building something more than well proportioned iron and brick and wood. So shall this house become a bee hive filled with the honey of ideas and with each new swarming from the hive new elements of strength will be added to the community.

The passage from the old building to the new will be a symbol of progressive intellectual change.

Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free.

WILLIAM EMSLEY JACKSON'S DIARY OF A CATTLE DRIVE FROM LA GRANDE, OREGON, TO CHEYENNE, WYOMING, IN 1876

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This diary of a cattle drive from La Grande, Oregon, to Cheyenne, Wyoming—presumably the first of its kind to be published—was kept by a 17-year-old boy, William Emsley Jackson, during the summer of 1876.¹ Neither of the editors has seen the original diary, which indeed may no longer be in existence. The present printing is from a copy of a transcript of the original made by Mr. Jackson in 1928.² By way of introduction to his transcript, Mr. Jackson wrote:

I have copied the log practically verbatim. Made a few corrections in language where the fault was too glaring. The original written in pencil was so rubbed and effaced that it was almost impossible to read some parts, but they are practically correct. A few of the portions in curves [parentheses] were in the original copy, but most of them were added when copying to clear up some point, or for purposes of information. I lost my notebook after the first few days and could not get a new one till [the] end of the first month. Hence no record for that time.

For permission to publish this diary, the editors are indebted to Mr. Jackson's daughter, Miss Helen M. Jackson, of Spokane, Washington.

The loss of Mr. Jackson's record of the first month of the drive is regrettable, for one may well suppose that during the first few days of so unusual an experience a boy of seventeen would write interesting descriptions of the outfit and set down vivid impressions of his companions. We do know that the author was accompanied by his 15-year-old brother, Lorenzo Dow Jackson, who appears in the record as "L. D." Of the other members of the

party we know little or nothing. As to the organization of such an outfit and the actual equipment needed for so long a drive, much can be learned from the introduction to John K. Rollinson's *Wyoming Cattle Trails* (Caldwell, Idaho, 1948).

This diary is a valuable source for the history of an important cattle movement, which, until recently, has been neglected by students of the Far Western cattle industry. There is evidence that as early as 1875 some cattle were being driven from the Pacific Northwest to points east of the Rocky Mountains, and it is beyond doubt that by 1876 a considerable movement of cattle had begun from Oregon, Washington, and Idaho, to Montana, Wyoming, and Colorado, as well as to markets in the Middle West.³ This diary, then, is an early first-hand record of that eastward movement.

Students of the history of the Far West will observe with interest the route described by young Jackson. Speaking generally, the two herds comprising this drive moved eastwardly from La Grande to the Fort Hall Indian Agency, without any crossing of the Snake River. From the Fort Hall Agency they were driven southeastwardly toward Bear Lake, passing several Mormon settlements, including Bennington and Montpelier. Near the latter place the route turned eastwardly and presently crossed the Idaho-Wyoming boundary. The party first struck the Union Pacific Railroad at Granger. The route followed thereafter passed through Green River, crossed the Continental Divide at Bridger's Pass, went by Rawlins, and presently entered the Laramie Plains. On September 7 the party was within sight of Laramie. On September 13 William Emsley Jackson and his brother boarded a Union Pacific freight train and rode 20

¹ William Emsley Jackson was born at Plymouth, Illinois, on Sept. 22, 1858, and died at Spokane, Washington, on July 15, 1945.

² A typed copy of this diary, made by Professor C. S. Kingston, is in the Northwest History Collection of the Hargreaves Library, Eastern Washington College of Education, Cheney, Washington.

³ J. Orin Oliphant, "The Eastward Movement of Cattle from the Oregon Country," *Agricultural History*, 20:19-43 (1946).

miles to Cheyenne, from which place they continued their journey by rail to Illinois.

Thus it will be observed that these herds did not follow precisely the route of the Overland Trail used by the early immigrants to the Pacific Northwest, the most obvious deviation therefrom being the crossing of the Continental Divide at Bridger's Pass rather than at South Pass. Naturally, the drovers took their cattle where grass and water were available. Yet, despite the deviations from the older route, the party in charge of this drive met many immigrant wagons bound for the Pacific Northwest: a fact as interesting to the present-day reader as it was to young William Emsley Jackson in the summer of the Centennial Year.

The editors have been sparing in their annotations of this document, believing that the record is self-explanatory. With the aid of large-scale maps of Idaho and Wyoming, to be found in any standard commercial atlas, the route of the drive can easily be followed. A timetable folder of the Union Pacific Railroad would help the reader to identify certain small stations, such as Bryan and Hillsdale, that are mentioned in the diary. The few minor errors of spelling that appear in the text the editors are disposed to attribute to a typist, for they know that Mr. Jackson was a very careful man.

JACKSON'S DIARY

1876 left La Grande May 23, Oregon to go with Lang and Shadl[ely]'s cattle to Cheyenne, Wyoming. Overtook the herds on Clover Creek and went to driving with Lang's herd May 24, for \$30.00 a month. Sold my cayuse to Dooney on Burnt River for \$27.00.

June 23. Left Lang's herd and went to cooking for Cox at \$40.00, being then on Salmon River. (Cox was foreman of the stock herd of 1400 cattle.) Dirt, dust and sage brush, no grass and no water all the way.

June 22 [sic]. Passed Salmon Falls on Snake River.

June 28. Passed Shoshone Falls on Snake River, height 215 feet. Was within seven miles of them and was greatly disappointed at not getting to see them. The cook could not leave.

July 1. Came onto Snake River again and struck plenty of good grass [and] considerable Juniper along the river. Sage brush decreases in stature and in quantity. Disagreeable experience with

alkali dust, less frequent, but enough to leave its effects on the pages of this diary.

July 2. The Sabbath, and although this day is hardly distinguishable from any other by this crowd on this trip, we drive about two miles and lay over for the balance of the day. The drivers are cutting out and dividing the herds, putting all the large beef cattle into the other herd. Sage brush more scattering still, the vacancies being supplied with abundance of fresh bunch grass. We are now just opposite the Goose Creek Mts. off to the right, on which are large quantities of snow and considerable juniper timber. After sundown the mosquitoes are very bad, they keep us fighting with both hands.

July 3. Remained here till 4:00 o'clock and then moved one and a half miles up the road.

July 4. Grand Centennial Fourth of July. In a dry camp about two miles from the river.⁴ While we were eating breakfast there was discovered down to the left toward the river not more than 400 yards distant, a band of antelope. I counted nine. No one went after them. There have been quite a number seen during the last few days. Later we move up the river about three miles to a slough [sic] where a bridge is to be built across the Snake River, towards the construction of which \$8000.00 have already been expended. Here we lay over the remainder of the day, and enjoyed the Fourth as best we could under the circumstances. There was some whiskey drunk by the crowd, but not to excess, a little fight between two of the natives occurred. Knives were drawn, but nobody hurt. Nothing very uncommon took place to commemorate this eventful day. Mosquitoes annoying as usual. Shadley started for Kelton this morning.⁵

July 5. Arose early to begin the second century of our national career. Prepared breakfast as usual. Crossed Goose Creek. The herd went up the river and I made a circuitous route of seven or eight miles to make a net gain of two mi. It being 12:00 o'clock, we nooned. The mosquitoes are terrible. After dinner we moved 3 or 4 miles ahead and made a dry camp. The mosquitoes were so bad that we barely escaped being eaten alive, by losing a night's sleep and putting in the time fighting those blood-thirsty insects.

July 6. Moved on to Marsh Creek where there

⁴ A "dry camp" was a camp in which water was not readily available.

⁵ Kelton is a town in Utah, northwest of Great Salt Lake.

were 12 emigrant wagons camped. All bound for Oregon and Washington Territory. Bought a five-shooter of one of them for \$8.50. Later met three more wagons[;] made a dry camp 3 mi. from Marsh Lake, though it was not very dry, for it rained on us all night and everything was wet, but no mosquitoes.

July 7. Got up in the rain. Went to the lake and nooned, the rain having subsided, and it was 20 mi. to the next water. We moved out about 6 mi. and made a dry camp—a wet drizzly afternoon—no mosquitoes or rain tonight but wet blankets to sleep in.

July 8. Got up just as daylight was showing in the east. Terribly cold and chilly. Never did crawl out of bed under more disagreeable circumstances, even when I had snow to contend with, sore faces and necks the result of our experience on the night of the 5th with those insects (mosquitoes) for which Snake River is noted, are still in evidence. We have a terribly rough and rocky road today, muddy in places and several steep pitches hard to get over. Met 8 emigrant teams, one of which had a yoke of cattle. They had a drove of loose cattle. Contrary to us, they are taking cattle there to stock the country while we are driving the surplus east.⁶ Later we came down onto Raft River overtaking Langs herd, and camped for the night. The other herd goes on, it being only about 3:00 o'clock.

July 9. We lay here until about 3:00 o'clock P. M. resting as they call it. But for me it means extra work, as it is always washday. Towels and old sacks to wash, beans to cook, notwithstanding the scarcity of wood, and then I had time to go fishing for about one and one-half hours. Caught 12 good ones from 6 to 12 in. in length. About twice as many were caught in the evening. (The Company furnished us with hooks and lines.) Crossed over and went out about 5 mi. and made a dry camp. This ends another Sunday.

July 10. Had breakfast by "sun up." Moved down to Fall Creek a distance of about 4 mi., by 9:00 o'clock, where we lay over till toward evening, catching some trout 6 to 14 in. long, the nicest ones I ever saw. Several were caught, but I was unlucky this time. There passed us today six

travelers with about 6 horses. Met also 8 emigrant wagons, some of which were from Kansas. For the first time, we came into some juniper timber so I could have it for wood. Struck Snake about 1½ mi. below Fall Creek. We have been having a few very cold and chilly mornings for this time of year. An overcoat feels comfortable. This reminds me that we are getting pretty high up in the world. I write this while waiting for Cox to come and hunt out a place for camp. Today we received the intelligence from the Big Horn (through those immigrants) that the Indians have killed General Custer, two of his brothers and a brother-in-law, with the whole of his command, excepting five men, amounting in all to 300 men massacred.⁷ As to the truth of which we are not positive. Having come about 2 mi. we made a dry camp about 600 yds. from the river from which we carry water for camp purposes.

July 11. Drove about 3 mi. and nooned on the river about 2 mi. from Rock Creek No. 2. Caught lots of nice fish—different kinds—enough for dinner and breakfast. Moved on about 4 mi. over some terribly rough roads, passing through a narrow gap between high perpendicular cliffs. It is said that it was once a favorite place of attack for Indians, and that there are about 75 graves there, whose inmates have fallen by the treacherous foe. I noticed some of the Indians camped on a little stream about one mile from the river.

July 12. After traveling about 8 mi. we came to American Falls on Snake which have descent of about 50 ft. in 150 yds. Part of which is very rough. The river here is about 300 yds. wide. Here we met 13 emigrant wagons, most of which, I believe, were going to Oregon and Washington. Here we stopped for dinner and killed a beef—a yearling, and sold part of it to those pilgrims. Later drove on up to a stock ranch, filled barrel and bade farewell to Snake River.

Went about 1½ mi. and camped on the bluff along which we follow for some time. Here the mosquitoes were terrible, worse than we ever had them before, so thick that one might throw his hand out and strike a dozen at once. The boys went around with their heads tied up like they

⁶ For several years before 1876, a surplus of cattle had been accumulating in the Pacific Northwest. On this subject, see Oliphant, "The Eastward Movement of Cattle from the Oregon Country," *Agricultural History*, 20:20-22 (1946).

⁷ Custer's disastrous defeat took place on June 25, 1876. In the official report on this affair, see especially the telegram of General Alfred H. Terry, dated at the "Camp on the Little Big Horn River," June 27, 1876, in U. S. War Department, *Report of the Secretary of War, 1876*, 1:462-464.

had the mumps, or some other contagious disease. Along about 10:00 o'clock they quieted down.

July 13. Mosquitoes are somewhat annoying this morning, but not so bad as last night. Moved ahead about 7 mi. and nooned on Bannock Creek where we met two emigrant wagons, bound for Walla Walla. Moved on 3 mi. and struck a dry camp. Mosquitoes came nearer eating us up this evening—so thick that we could feel them in the air.

July 14. Got up at day break. It got so cool in the latter part of the night that the mosquitoes had to hang up, but as soon as the sun warmed things up they were at it again as bad as ever. Two emigrant wagons passed us before we got out of camp, all going to the same place, viz, Walla Walla. After going about 6 mi. we nooned on the Pownaph [Portneuf?] river. The river was almost swimming depth. Looking down upon Snake River, a wide and long bottom or valley, rather meets the eye. It began about 20 mi. below here where it gradually spreads out as one goes up the river until opposite here it is nearly 10 mi. wide and still continues to widen farther up. There is plenty of timber along the river and the creeks continue to drop in from either side. It is a beautiful country, though I should judge it is too wet, and owing to the altitude, too cold for a farming country. I understand this to be the Indian reservation. There are thousands of acres of good hay land in this valley that never saw a sickle. Near here is Old Fort Hall.⁸ After noon we crossed the Portniple [Portneuf?] river, the water running well up into the wagon bed. It was too late to go far, so we struck a dry camp, just up on the bluff.

July 15. We lay here till evening and then go down to the river and fill the barrel and go out about 4 mi. and make a dry camp. Here for the first time there passed us one emigrant wagon going east to Nebraska, having left the latter place one year ago and gone to the Willamith [Willamette] valley. They are disgusted with Oregon. There were the parents and three or four children.

July 16. Five miles brought us to the Indian

⁸ Fort Hall was built in 1834 by Nathaniel J. Wyeth, an American fur trader. F. G. Young, ed., *The Correspondence and Journals of Nathaniel J. Wyeth, 1831-6* (Eugene, Oregon, 1899), 227. This post was acquired by the Hudson's Bay Company in 1837. E. E. Rich, ed., *The Letters of John McLoughlin from Fort Vancouver to the Governor and Committee, First Series, 1825-38* (Hudson's Bay Record Society, Publications, vol. 4, 1941), cxiii, 279.

agency of the Snake Indians which is located on Rosse's [sic] Fork, a small stream flowing into Snake River. There are about a dozen houses, a grist mill and a store or trading post. There were some cultivated fields of grain and vegetables.⁹ We got a few supplies, went up the creek about $\frac{1}{2}$ mi. and nooned. After noon we moved out about $3\frac{1}{2}$ mi. farther up the creek crowding Lang's herd pretty closely. We have excellent water now from nice mountain streams, the water right off the snow is as cool as one can drink.

July 17. Moved on up the creek about 3 mi. and nooned. Later went on about 2 mi. and camped.

July 18. Jeff Lurnbow took a horse back to the station for Shadley. Moved on up the creek about 6 mi. Still right after Lang's herd. Struck a dry camp about a mile farther just before reaching the divide.

July 19. A bunch of Indians, 6 or 7, passed us. Jeff came back without Shadley. He was not at the station. Plenty of snow within a mile of us. Crossed the divide and went down on the other side about 5 mi. Still in Snake basin. Here a road leading out into Montana makes a junction with ours. A drove of about 250 cattle came in on it and passed us. They were driving to New Mexico. This is a delightful country. Not rough and rugged as one might think to find it at this elevation, but it consists mainly of smooth rolling hills which are covered with grass and clumps of brush. But these hills would be called mountains in a less mountainous country. Sage brush is not much used for wood now, because it is not so common. Some small stuff in places. We are now in the place that we have been looking forward to with longing hearts, where there is plenty of good grass, good water, no alkali dust, nor sage brush; and we enjoy it greatly. All say that this is the best camp that we have had. While we were resting here six small freight teams passed us. They had taken a load of grain out to the Montana stage line. Afternoon went about 3 mi. and camped on a little creek that puts into the Portniph [Portneuf].

July 20. Met two emigrant teams. Moved up

⁹ From the Fort Hall Agency W. H. Danilson, the U. S. Indian Agent, wrote on Sept. 7, 1875: "The agency farm on Ross Fork contains 234 acres. The crops are estimated at 1,800 bushels wheat, 800 bushels oats, 150 bushels barley, 2,000 bushels potatoes, and 1,000 heads cabbage; 100 tons hay have been put up at the agency-stables, and 100 tons more are being put up for the stock-cattle on Fort Hall bottom." U. S. Office of Indian Affairs, *Report, 1875*, 259.

the creek about 2 mi. and nooned. The Montana herd passed us. Caught several nice trout from the creek. The greenherd flies are very bad. They nearly set the horses crazy. (They are "one fly in the ointment.") Afternoon, went about 3 mi. and struck a dry camp. Met 9 emigrant wagons.

July 21. While eating breakfast an accident happened which caused quite an uproar in camp. The horses which were to be used for the day had been caught and tied to the wagon, all on one side, when one of them went to pulling back. The others, thinking that something was wrong began pulling too. The result was that the wagon was upset and the contents badly scattered. This caused me to get a late start and so the cattle beat me to camp. Met five emigrant wagons today. Passed Lang's herd. Afternoon, went about 4 mi. and struck a dry camp. Just before dark Vidito, who had been out after some wood, a few hundred yards came running into camp with the report that a bear had been seen. So he and three others went in search of the animal, but they were so long preparing for the chase and it was so near dark that bruin was not to be found, and the hunt was abandoned.

July 22. A drive of 4 or 5 mi. brought us to a little settlement of Mormons, about three families (may be only one father). Passing which we came to the strongest kind of soda and mineral spring and farther on we came to beautiful springs of clear water where we nooned. But the water proved to be so strong of soda that we could hardly use it. So we went back to the house and filled the barrel, then drove on about 3 mi. and struck a dry camp. The roads have been very rough and rocky the last few days. The hills and mountains are more rugged. Just before reaching camp we had quite a shower of rain, and it continued to storm at intervals all night. Two or three hundred yards from camp we discovered a hole in the rocks about 50 feet deep and very narrow at the top. It was in solid rock.

July 23. A drive of 5 mi. brings us to Bear River. Along here we noted a number of curiosities. There were several holes in the ground enclosed by solid rock walls, forming natural fortifications, and just as one turns the point to go up the river, one sees a slanting hole in the solid rock as far down as one can see. Here we follow up the flat about 2 mi. before we come down to the river. Another 2 mi. and we noon about $\frac{1}{2}$ mi. from a Morrisite village.¹⁰

¹⁰ On the Morrisites, see Hubert Howe Bancroft, *History of Utah, 1540-1886 (The Works of Hubert Howe Bancroft, vol. 26, San Francisco, 1889), 615-621.*

Along here are to be seen some wonderful curiosities, among which are the soda springs that boil, or spout, up through the solid rock, though not hot. One of these is called Steamboat Springs. It is located about $\frac{3}{4}$ mi. below the village on the river. Here the warm, heavily impregnated soda water gushes from the solid rock through a hole about 14 in. in diameter, to the height of two feet. Ten or twelve feet from this vent the gas and steam [?] escape through fissures in the rock conveying a hissing sound like that of a steam engine. Hence the name. Afternoon we passed through the Morrisite village, which has one store and about 10 families. I understand that they are a Sect of Mormons. This being Sunday we saw the inhabitants quietly walking the streets, or sitting on the porches or doorsteps in conversation. One mile farther brings us to Soda Springs, another Mormon village, somewhat larger than the other. Here is one of the finest natural soda fountains in the world. Strong, cool soda water bubbles up in a 2 ft. column. It is highly recommended for invalids, who come in numbers to secure its benefits. Went on about $1\frac{1}{2}$ mi. and camped. Heavy rain during the night.

July 24. Got up and prepared breakfast in the wet and rain, then ran back to town for supplies. As we entered the town a flag was hoisted on top of a little bluff, which called our attention to the fact that this is a holiday celebrated by these people in commemoration of the landing of Brigham Young and his followers on the site of Salt Lake City. This being the 31st anniversary.¹¹ We were unable to participate in their festivities, but we were told that the day was spent in music and dancing. Went about 5 mi. and nooned. Afternoon, shortly after starting, it began to rain. Met 9 emigrant wagons. Went about 3 mi. and camped about $\frac{1}{4}$ mi. from the river. Got supper in the rain. Considerable rain during the night.

July 25. Showering till about ten a.m. Thought that I would have time to go up the hill and see Swan Lake, about a mile distant. It is celebrated for its beauty. So I went to the lake that has an elevation of several hundred feet above the river. It is enclosed by a wall of rock on the lower side from two to six feet high and about 100 yds. long. (This wall is a natural formation caused by the deposits of mineral matter that the water held in

¹¹ Here the author should have written 29th instead of 31st. For an account of the arrival of Brigham Young and his party at the site of Salt Lake City on July 24, 1847, see Bancroft, *History of Utah*, 262.

solution.) The water seemed to be from 10 to 15 ft. deep and is so clear that one can discern pebbles and sticks on the bottom. On my way back to camp my horse stumbled and fell rolling over on his side hurting my back so that I shall not be able to do anything for several days. I could hardly ride to camp, but did so with great difficulty through a driving rain. On reaching camp was not able to get dinner, so Vidito took my place. Afternoon, moved down the river about 2 mi. Just after reaching camp, we had a very heavy wind and rainstorm, with considerable thunder and lightning—some rain during the night.

July 26. Sun came out clear, but it is cool as is generally the case when one is in sight of snow. Back some better this morning. About 4 mi. out, nooned on the main road. Not much wood. Met 8 emigrant wagons—one a 4 ox team. Afternoon met 5 emigrant wagons. Can count about 30 individuals around their camp, which is about 150 yds. from ours. We came about 3 mi. since noon. While in camp here 4 more emigrant wagons arrived. Back feels better this evening. No rain today. Nice weather again, wood very scarce since we got out of the sagebrush country.

July 27. Sleep until I get ready to get up now, since I am not able to do anything. About 2 mi. drive brought us to another Mormon village, containing 12 to 15 dwelling houses. One mile more to noon camp. Met today, 18 emigrant wagons of which 6 were cattle teams of one yoke each and one of 2 yoke. They were from Ind. Ill. Mo. and Arkansas. Some bound for western Idaho and some for eastern Oregon. But the most of them were going to northeastern Oregon and Wash. Ter. A large emigration this year. Afternoon, after driving 3 or 4 mi. struck a dry camp. Met one emigrant team driving one horse and one mule—from Arkansas going to Walla Walla or thereabouts.

July 28. Three emigrant teams passed us while in camp—are being rushed right along now. Five herds of cattle between here and Georgetown. 2½ mi. brings us to Bennington, quite a thrifty little Mormon colony. Passed 6 more emigrant wagons. 4 mi. more brings us to another Mormon town known as Montpelier larger than any other that we have passed through.¹² These people seem to live happily and enjoy themselves. Here are quite extensive settlements—farms and good houses. None appear to be exceedingly wealthy, but have

all they need. All the mercantile business is done under the name of Zion's Cooperative Mercantile Institution. (Z. C. M. I.) This is a pleasant place during the summer—snow in sight the year round. The hardest part of the winter here is after Christmas. They have to feed the stock 3 months—pretty frosty, but I notice fine crops (or patches) of potatoes, beans, corn, oats; all late, but if winter holds off they will mature. We got good potatoes (old ones) raised here for \$.50 a bu. Everything cheaper here than I have had it elsewhere on the trip. Butter \$.18, Eggs \$.15, and other things in proportion. (It was a luxury to get some of these things.) The principal occupation of the people of this region is stock raising. Across the river from here are several colonies or villages. Paris, the largest, is about 18 mi. from here. The valley is from 10 to 15 mi. wide. On the other side and above Paris is Bear Lake, which is said to be about 30 mi. long and 20 mi. wide, and deep enough anywhere to float a steamboat. It is about 15 mi. from here to the lake. Went 1½ mi. and nooned at a dry camp. Here we take a new cutoff which shortens our road 4 or 5 mi. Instead of keeping up the river, we turn to the left out into the hills and strike camp after a 4 mi. drive at a little creek.

July 29. Our road leads over a terribly high hill a mile to the top—road little better than a trail. Go up a terribly rocky canyon so sidling in places that it was with difficulty that we kept the wagon right side up. Going down the other side it was even worse. After traveling this miserable road for 7 mi. we struck noon camp at 12:00, on a little creek near a sheep ranch. Afternoon, out at the usual time and struck a dry camp ¼ mi. from Thomas's fork of Bear Riv. We are about 3 mi. from Bear River. Are in a nice green valley about 2 mi. wide which continues to widen toward Bear R. with high mountains on the east—only one ranch in sight and it was deserted.

July 30. We go a mile up the creek and cross to the other side, and nooned on a small creek that comes out of the canyon on the east. Sprinkled a little. I am now able to help a little around camp, but my back is terribly weak. Began a letter to Mother. We lay over the rest of the day. Are within ½ mi. of the Idaho and Wyoming Ter. line, running north and south.

July 31. The last day of the great Centennial month. The day was signalized by our crossing the Ida. and Wy. Ter. line, which was marked by a stake every half mile. The boys say that they cannot see any difference between one side and the

¹² Georgetown and Montpelier are small towns in Bear Lake County, the southeasternmost county of Idaho.

other. Passed two ranchers and met 8 emigrant wagons bound for the coast. Our road leads up the river bottom along the foothills. After a drive of about 5 mi. nooned on a little creek. Afternoon, on the road I took the team again myself and went to cooking, as my back feels able. Flies are bad again. Crowded now more than ever. Three herds in sight, 2 mi. up the river and we camped. Have *shewalla* (fish) for supper. Met one emigrant team.

August 1. We began another month with the impression that we should be on the road as long again as we anticipated being at the first of last month. I hope that we shall not see two more months on this trip. Passed an Indian camp of three wigwams belonging to the Snake tribe. Flies terrible again today. Almost impossible to keep the horses in the road. Three miles brings us to Smith's fork of Bear River. It is quite a large stream. Crossed and went out two mi. and struck a dry camp and nooned. Flies like man's flesh as well as horse's flesh. I omitted to say that there is quite a settlement at Smith's Fork. We left the main Bear River this morning. Afternoon, go out 3 mi. and make a dry camp.

August 2. Two miles brings us to a terribly steep hill about a mile in length and very rocky. The steepest hill that I ever ascended behind a team. Am now on top waiting for the herd to come up. I can see about a mile ahead a hill equal in length and magnitude to the hill just described, though I think it is not so rocky. The flies are not all dead yet, nor does their passion for blood cease. After going down hill for about a mile we noon on a little creek. Afternoon—Now comes the ascent of the second big hill—up about 2 mi. and very rocky in places. Descending, we pass through a little belt of fir and hemlock, a half mile further we struck a dry camp having gone about 3½ mi. since noon.

August 3. No water for cattle and a long distance before we come to any, on the road. After 1½ mi. we cross a little spring branch. Farther along the road we passed a grave on the headstone of which was carved:

MISS NANCY J. HILL
of
MONROE CITY MISSOURI
DIED IN 1852
Age 20 YR.

We have passed many graves on the road which I have taken no notice of. Passed one yesterday under the name of J. WILLIS. After descending a long, steep, rocky hill, we came down onto Ham's

Fork of Bear Riv. About half way down the hill on the right hand side of the road we discovered a little grave. The inscription on the head board too obliterated to read. Ten emigrant wagons were camped down in a Gulch on the right, bound for Oregon and Wash. T. Nooned down on the creek having come nearly 8 mi. this a. m. Ham's Fork is a very clear stream, averaging two rods wide. This we follow down till we come to Granger on the railroad. Here strikes off the upper road, as it is called, leading to the upper ferry on Green River and down the Sweetwater. Afternoon. Crossed and went down the creek about 2½ mi. and camped. Cox came rushing in with the report of bears across the creek. Said he saw two. I looked and saw some young eagles which I thought to be bears but discovered my mistake after Cox and Vidito had armed themselves and gone in pursuit of bruin. They found the eagles and captured one but they found no bears. They still contend that they saw some bears.

August 4. One month has already rolled by of the second century of the birth of our nation and talk of the Centennial is about ended. It will only appear in history for another hundred of years. Went down the river about 3 mi. and nooned. Passed two recent Indian towns of from 20 to 30 teepees and another just above camp of about 30. Perhaps all were made by the same band, which keeps moving down the river. (Only the poles were left standing.) We understand that these Indians are camped about 10 mi. below us, now. Passed 3 emigrant wagons bound for the north west. Had quite a lively thunder and rainstorm just after reaching camp. Afternoon. About 4 mi. brought us to night camp on a bluff of the river where we had to carry water up a very steep place, set it up ahead and then climb up after it. Sage hens, prairie chickens, and fish are plentiful through here. We have some to eat almost every day.

August 5. Very cold this morning, froze ice through the night. An overcoat doesn't come amiss these mornings. Plenty of sagebrush again, hills rather barren; grass dry and scarce, though plentiful in the bottoms. On the road. Strike the river about 1½ mi. from camp and then take around the hills again about 2 mi. then down to the river and cross. Next comes a very bad place to get around with a wagon between the river and the bluff. It took five of us to make it and then had to take the horses off. Came very near going into the river at that. Out over the hills again and nooned on a little creek strong of alkali—water not running.

Made about 4 mi. this morning. Afternoon. One mile and we strike the river again also an Indian town of about 40 lodges. They belong to the Greenriver tribe. All seem to be civil and social. The men are mostly gone. They have several hundred head of horses grazing on the bottom. We strike out on the hill again about 2 mi. and camp. Dry camp. Have come about 7 mi. today.

August 6. One and one-half mi. brings us to the river again, where we cross, go down about $\frac{1}{2}$ mi. camp and lay over for the rest of the day, and kill a beef. Good many suckers in the creek. The boys shoot one once in a while. A couple of men (trappers), with an Indian squaw and 8 or 10 head of ponies, passed us going up the river.

August 7. "Pulled out" and went down the river about 3 mi. crossed and camped about one mile from the ford. Wrote a letter and sent it to Granger by Lang. Here we lay over the remainder of the day. Lang is still at the first crossing. A little shower today.

August 8. We lay over here today. Caught a few fish and went in swimming. It's a beautiful camp, plenty of wood, grass, and water—shade in the willows—good bathing and fishing. (Ideal) Harrow's herd of 1000 cattle overtook and passed us, going out on Greenriver. Lang returned from Granger this evening.

August 9. We go to driving again. Moved down about 5 mi. and nooned on the river. Here, Bill Shadley and his brother Ben, partners in the cattle, come out from Granger. Afternoon. Crossed the river, went down about 4 mi. and camped. This has been a very cold and chilly day for this time of year. An overcoat feels comfortable while riding. We are lucky to have plenty of wood and we burn it in no small quantities.

August 10. Very cold this morning, ice as thick as a thin windowglass, though turned very warm after the sun got up. Moved down about 4 mi. and nooned. Afternoon. Went down about 5 mi. and camped. There is being considerable hay cut along here this summer. Passed one ranch today and a hay camp is just below us. Several emigrant wagons went up on the other side but I could not ascertain the exact number.

August 11. On the road. Now for the first time in 3 yr. I see the smoke of the railway cars about 7 mi. distant. Begin to think we are getting back to America. We cross the river twice and noon at an old corral about $2\frac{1}{2}$ mi. from the railroad. Afternoon. Moved up to within $\frac{1}{4}$ mi. of the station and struck camp on the river, and now for the

first time since the spring of '73, I see a railroad train of cars—a passenger of 7 coaches bound east. We are now on the celebrated line of communication which connects the two oceans, the importance of which one can readily comprehend when one sees the six telegraph wires on both sides of the track and the 6 or 8 trains passing daily. This is very rough country for a railroad—up grade, down grade, over bridges, through tunnels and snowsheds.

August 12. Cross the creek, and a few minutes brings us to the great U. P. Here we also strike Black's Fork, a tributary of Greenriver, which receives the waters of Ham's Fork a short distance above and which the railroad follows crossing occasionally. Here lies a train of 24 cattle cars on which Lang ships 400 head of beeves to Chicago.¹³ M. Shields and D. Clark in charge. Went down the railroad about 2 mi. crossed and nooned on Black's Fork. I should have mentioned that here we received ten Sharp's carbines and 90 pounds of cartridges, furnished by the company. We also have one Sharp's sporting rifle, one Henry rifle and one Winchester. Besides a number of the men have their own revolvers. P. M. Crossed the railroad again and went down about 5 mi. and struck camp on the river, after breaking the wagon tongue and driving about one mile without any. Here we repaired the wagon tongue with few tools to work with—an old ax with an edge like that of a mill pick, a file, and an old rusty brace and bit. However when finished we thought it was not likely to break again.

August 13. About 16 of the horses are gone. Two men are out after them. One man brings them in after following them 12 to 15 mi. After dinner moved on, crossed and re-crossed the river and camped, having gone about 5 mi.

August 14. Horses were all gone this time, but were brought in about 8:00 o'clock after being trailed clear over to Greenriver a distance of about 10 mi. The greater part of Lang's herd was also found across that river, having had a stampede. A drive of six miles brings us to Bryan, which has been a pretty lively station but is about dead now, more than half the houses having been torn down. Crossed the railroad once this forenoon. P. M. Here we leave Black's Fork and strike across to Greenriver a distance of 14 mi. and no water.

¹³ It is possible, though not certain, that this was the shipment of cattle mentioned in a story published in the *Weekly Drovers' Journal*, and later quoted in the *Walla Walla Union*, Sept. 16, 1876.

Follow the railroad out about 2 mi. and leave it to our left. Out into the hills and make a dry camp on the divide, having come about 7 mi. Traces of an old telegraph line are noticeable along here. But little grass which has been the case since leaving Ham's Fork.

August 15. Seven miles brings us to Greenriver. Strike the river about $\frac{1}{2}$ mi. below the city. This is the largest stream since leaving Snake R. it is 100 yards wide in places. Forded the river and went up to town for supplies. This is the largest and most important town since we started, having a round house, car works, six or eight stores, numerous saloons, and boarding houses. As one stands here and looks out beautiful scenery meets the eye. We are surrounded by rugged rocky hills which rise abruptly on every side to a height of hundreds of feet. Bare rock of a somewhat circular shape and flat tops projecting perpendicularly many feet above the lower hills are very prominent. P. M. Here we leave Greenriver, as does the railroad, and go up the famous Bitter Creek, which has been our dread during the previous part of the journey, and which is noted for its numerous bands of horse-thieves and robbers. No grass and only the strongest alkali water, poisonous to man and beast. Hence, the name. I forgot to mention that we met 5 emigrant wagons near Bryan and 6 at Greenriver. We cross the railroad again and go out about 2 mi. and noon. Terribly rough roads—some heavy grades on the railroad, deep cuts and high embankments. P. M. Out again after a speedy dinner. A 4 mi. drive brought us to a section house where we filled our barrel with good fresh water from a water car, or tank. Crossed the railroad and Bitter Creek and went out about 2 mi. and struck a dry camp. I should have said that we left the main road to our left just the other side of the last station.

August 16. After going about 2 mi. we left this road to our right and struck out on a still less traveled one. Harrow keeps the main road. Four mi. brings us to Little Bitter Creek. Can use the water, but it is pretty strong of alkali. Here we noon. There is a great deal of juniper timber on these hills, especially on the east or right bank. These hills are no more than large piles of rocks of all sizes, the juniper and cedars springing up through the crevices, making an odd looking spectacle. This is a small stream about two feet wide, with holes here and there from two to five feet deep. P. M. Crossed the creek several times. Left it and went up into the hills to a little creek of very

good water and camped. Came about 4 mi. since noon over some very rough roads.

August 17. One mile brings us to a deserted place having the appearance of a stock ranch. Has been vacated but a few days. Doors are open although several things of value are in the house—a stove, nice bureau, and some chairs. Perhaps its desertion is only temporary. A hen and chickens are parading around. Follow up the creek about 4 mi. and noon. Have the finest kind of water, pure and cold from a spring. About $\frac{1}{2}$ mi. back is a cave in the side of the hill, perhaps a den for horse-thieves and robbers. Its capacity is sufficient to hold a great many horses and is fixed up very nice. P. M. Continue up the gulch for 3 mi. and struck the main road on top of the hill—thence as much farther down hill and camped on a little stream.

August 18. Follow the stream about 4 mi. cross over a hill and struck another stream on which we nooned. Here we let Lang's herd pass us. P. M. After 3 mi. we strike a little creek with plenty of water in it, but go on over to Salt Mill Creek and follow up it about 2 mi. and camp. Traveled today about 12 mi. This water is strong of alkali, but have to use it for cooking.

August 19. Ten miles to water, which we made by 2 o'clock p.m. It is very strong of alkali. After dinner went about 3 mi. and camped on top of the hill. The hill was so steep that it took five men to help me up it. Rained during the night.

August 20. Met an emigrant team with a ramshackle wagon, three men, a woman and a dog. The woman was walking leading a horse on which a dog was riding. I forgot to say that while in noon camp yesterday, there passed us a man riding an ass and leading one of the same animals packed. Also a man and family with a 4-ox team and some loose cattle. There were two or three boys large enough to walk and help drive. The wagon, which was about a 16 foot one had slats up all around to keep the other children from falling out. It was full of younger children. All bound for the west. After a drive of 3 mi. we strike a little creek and nooned. Here is a nice spring of cold water, but contains some alkali. An emigrant train of 4 wagons is lying over here. Thus we all [are] reminded that this is Sunday. P. M. Go on about 5 mi. and strike a dry camp.

August 21. Soon after starting it began to rain and blow and was pretty cold. Met 13 emigrant teams. About 2 mi. came to a little creek and followed down it about a mile to find water, only to return after noon. P. M. Strike out on a 9 mi.

drive. Go about 10 mi. and make a dry camp, which proved to be [not] so dry after all for we had considerable rain during the night.

August 22. Strike water at Bitter Creek. Here we also strike the old overland stage and mail route which is marked by the remains of old stage, some stands and tel. line.¹⁴ These buildings are of stone and very strong, low and covered with earth, with loopholes so arranged as to guard against attacks from Indians. There being no grass we fill up the barrel and go out about 2 mi. and noon. Twenty miles to the next "chuck" (water). P. M. Drove out about 10 mi. and struck a dry camp, after passing another station. Used telegraph poles for wood, though few remain, nearly all having been used for that purpose. This place is known as Antelope Springs.

August 23. Unusually cold this morning. Froze during the night. Had breakfast by daylight. About 7 mi. brought us to another station which we passed going on about 3 mi. to Barrel Springs—salt water. Met this forenoon 8 or 10 emigrant wagons. Water in the creek for the cattle. P. M. Strike out on another 20 mi. drive. Go 12 mi. and strike a dry camp after passing another station known as Antelope Springs. Tonight ends my second month with Cox.

August 24. Very cold this morning, faucet frozen up. Drive from the bedgrounds as we did yesterday morning. Eight miles brings us to Mud Creek, where we noon. Some antelope passed camp this morning. A couple of shots were fired after them without effect. Lots of game in this region. Buffalo are among the animals that have become extinct here. Numberless buf. skulls are to be found all along the road, but none of the animals are to be seen. P. M. Ascend Mud Creek about 6 mi. and camp after passing another old stage station. In crossing one of the tributaries of Mud Creek, my leaders mired down in the mud, and it was only by taking them loose and after a terrible struggle on their part that they succeeded in reaching

¹⁴The reference is to the Denver to Salt Lake City Division of the Holladay Overland Mail and Express Company. For a list of the stations on this division, see James Vincent Frederick, *Ben Holladay, the Stagecoach King: A Chapter in the Development of Transcontinental Transportation* (Glendale, Calif., 1940), 291-292. The map near the end of this book shows the lines of the Holladay system. Useful also is Samuel Bowles, *Across the Continent...* (Springfield, Mass., 1865), ch. 7. There is a satisfactory map at the front of Bowles' book.

terra firma. Then by hitching on to the hind end of the wagon and drawing it back, I was able to select a crossing which was passable.

August 25. No grass, so we drive from the bed-ground, go up the creek about 5 mi. and noon. Have been out of meat several days, but our desire for this article was soon gratified when we saw Cox and Ben coming in with a yearling deer. The country through here is very rough and rugged—fearful ditches and holes in the rocks. One man asserted he saw a ditch on the level all of 100 ft. deep and also that he saw a hole not more than one foot in diameter and many feet deep. Could form no idea of its depth. P. M. Leave the creek and strike it again after about 3 mi. cross and go up about 4 mi. more and camp in the canyon after passing the remains of another stage station that suggests an ex-fort.

August 26. Drive from the bedground again and noon about 3 mi. up the creek where we leave it altogether. L. D. saw 26 antelope on the hill but got none. I can see a herd from camp. P. M. Drive out about 5 mi. and though water is handy, make a dry camp. Here is where I got the fox tail. (One of the men killed a fox and brought me the large red, bushy tail.)

August 27. Two mi. brings us to the summit of the Rocky Mts. This is Bridger's Pass.¹⁵ To an uninformed person it would seem nothing more than going over another hill. It does not appear to be so high, although we are aware that we have been traveling up hill for a distance of 1000 miles or more. There is plenty of snow in sight, apparently no higher than the road. I am ready to confess that the scenery here falls far below my expectations. Nothing more than a sagebrush region dry and barren, some dry scattering grass, and a little willow and cottonwood brush along the creeks and spring branches. Very little timber of any size. Here we stand on the summit of the great Rockies, on the rim of the great Mississippi Basin, the largest in the world, extending half way across the continent. And now we begin to descend the east slope of this great mountain range. Our waters henceforth are those whose home will be the Atlantic. We now bid farewell to the waters of the Pacific Ocean and the cool pleasant breezes from the southwest. After going down about 7 mi. we strike a little spring branch just below a grove of cotton-

¹⁵See the references in footnote 14. Stages on the Denver to Salt Lake City Division of the Holladay Line went through Bridger's Pass.

woods and willows where we noon. This being our nearest point to Rawlins, 18 miles from here. Cox takes a pack animal and goes to that place for supplies. P. M. A drive of one mile brings us to Pine Grove where lies the remains of another stage station. 2 mi. farther, after driving awhile on a less traveled road higher up the hills and to the right of the main road, having plenty of water in the barrel, we struck a dry camp, though there was plenty of water a few hundred yards back on the road. Grass is scattering and there is plenty of snow on the hills a short distance away. Cox failed to return.

August 28. Arose in the morning in a very cool atmosphere, on the eastern side of the Rockies. Had an early breakfast greatly limited as to the diversity of eatables, as our "grub" failed to arrive. Drive down a little creek about 3 mi. fill up the barrel and go out 2 mi. more when we were obliged to stop and noon without any additional "grub." We have to take bread and coffee straight. Boys think it terribly rough, having had their mouths fixed for a square meal by this time. Nevertheless, it was soon dispatched and we moved on without unhitching. P. M. Crossed the creek and went out about 4 mi. and struck a dry camp within 6 mi. of the North Platte River. Our "ship" arrived this afternoon and the boys were made happy once more with plenty to eat.

August 29. The 6 mi. was accomplished in due time and we nooned on the historical Platte. It is a beautiful stream about 60 yards wide, and very shallow, cool transparent water. Here are cool shady "bottoms" with luxuriant grass, making a fine resort for deer and antelope. We were so pleased with the surroundings that we concluded to lay by until tomorrow noon. P. M. Moved up the river a few hundred yards and pitched our camp in the shade of a tree for the first time of the trip, a gigantic cottonwood. On the opposite side of the river reaching to an elevation of 150 to 200 feet above the water is a bluff of solid rock extending at least a half mile along the bank. About $\frac{3}{4}$ of the way up the cliff and in a small crevice is to be seen an eagle's nest, a fearful place for a mother to rear her young but such is the habit of that bird. After arranging camp had ample time to wash up a few things, among them the old table spread which was a terribly greasy black thing. Also took a bath in the river which runs a cold one I tell you, for remember an overcoat is required to secure comfort any of these mornings. Two western bound

emigrant teams passed us today. Also two eastern bound wagons crossed and camped on the other side. They have been four years in northern California, and are now migrating to southwestern Kansas. I stand guard tonight for L. D. to give him a chance to sleep. Am on duty from dark to 11:00 o'clock.

August 30. All hands take things easy this morning for we lay here till noon today, and are in no hurry, so dinner time comes sooner than usual and we have little time to do extra work between breakfast and dinner. P. M. Went down to the ford and crossed the river. The cattle cross above. Drove out about 6 mi. over some very rough roads and struck a dry camp. Pretty good grass.

August 31. Last day of August. Colder than common. A drive of seven mi. brings us to Pass Creek, a nice little stream too deep to cross without getting one's feet wet. Here lies two herds. One is Shadley's beef herd. Clark having taken charge of the same is lying over waiting for Shadley to return. So we lay here the balance of the day. We burn "buffalo chips" for fuel. No other is to be had. A couple of other boys and myself go out hunting after dinner, four or five miles in the foot hills of Elk Mountain. I got one shot at an antelope about 300 yards distant, but missed. Saw two others and returned after about three hours greatly fatigued only to go to work and get supper. The hunt proved fruitless with all. Shadley came riding in this evening.

September 1. We begin the month on the fifteenth of which we had hoped to arrive at our destination—Cheyenne. We now see that we can reach it easily by that time and feel encouraged to think that our cattle-driving is so near an end. Cold as usual this morning. Got breakfast with my overcoat on, though not for the first time. A drive of 3 mi. brought us to a little creek on which, after following it up for 2 mi. we nooned, amidst a vast multitude of grass-hoppers, those destructive pests that have made Kansas so notorious. The ground is covered with them and the air seems alive with them as far as the eye can see. Must be getting pretty close to Kansas. They seem to be going south west. P. M. A drive of 4 mi. brought us to a little creek within one mile of Fort Halleck,¹⁶ where we camp in a nice bottom. We are now on the north side of Elk Mountain, which is covered with a dense growth of heavy timber. This ends the first

¹⁶ The map in Bowles, *Across the Continent*, shows the location of Fort Halleck.

day of September and we are 140 mi. from Cheyenne.

September 2. Every day brings us one day nearer the 15th on, or before which we have hoped, and do still hope to reach Cheyenne. Was up this morning before the moon set. It shines all night now. Stopped at Halleck for some supplies. Here are the remains of an old fort that has been deserted since the completion of the railroad, excepting one or two families who have remained to trade. I was going to get a few articles of clothing but they set such an enormous price on everything that I thought I could not stand it. From here can be seen one little streak of snow on Elk Mountain, but south east of this in the same range are two or three higher sections on which is a great deal of snow, though they do not look so high as this on Elk. In 4 mi. we come to a little creek where we nooned. Passed several lakes, some of which were several hundred yards in width. Got a shot at an elk on the road at about 150 yards distant but missed. It then ran down into the road and stopped, but before I could get another shot Shep chased it off and so I lost my meat. The lack of meat however was supplied that noon with a two-year old beef.

I have since thought that it was a mule deer instead of an elk and that it was much farther away than I have stated. In my haste I raised the sight on my gun or I should have brought it down for I saw the bullet strike just over the deer's shoulder on the hillside.¹⁷

P. M. Two miles brings us to Medium [Medicine] Bow River which is lined with a heavy growth of cottonwood and underbrush. There was a stock ranch at the side of the road. Took water here and went out about 5 mi. and struck a dry camp.

September 3. A drive of 3 mi. brings us to Wagon Hound Creek, where once was a stage station, I should judge from the looks of the surroundings. There is a terribly steep and rocky hill to be climbed to get out of here, which I made by the help of the hostler. Soon after we pass a herd of about 500 cattle from Marsh Valley, Idaho. Their destination was Laramie. Farther on we struck a creek with water standing along in holes and nooned. We are now on the Laramie Plains, the most elevated in America. They lie between the Rocky Mountains and the Black Hills. This region is noted for its numerous herds of antelope, which

we see by the dozens. P. M. The first thing of note that we strike are some newly discovered placer mines which have been extensively prospected and found to contain gold in sufficient quantities to pay. Although water is necessarily scarce, preparations are being made to work them. Here also passed us an outfit of prospectors, seeking for wealth, consisting of three saddle horses and seven pack animals. They were well armed and a hard looking set, I would say. They did not know where they would stop. Two miles brings us to Rock Creek number 4. I think it was not misnamed, for several hundred yards on each side is a continuous field of boulders as also is the bed of the creek, which makes it almost impossible to ford it. Here is a sort of mining camp or town, several log huts and a store, which also is in a log hut. They have for sale a few canned fruits, baking powder, oysters, and some "49" butter, also one jumper, two over-shirts and a pair of overalls, by selling which they seem to expect to get rich, judging from the prices that they ask for them. We go on about 2 mi. and strike a dry camp after crossing a little creek.

September 4. We now in reality strike the Laramie Plains. One and $\frac{1}{2}$ mi. brings us to another little creek where we water then go $3\frac{1}{2}$ mi. farther and strike another little creek where we noon. Can see antelope in nearly any direction we may look. P. M. Had quite a heavy shower and considerable wind after we got out a ways on the road. After a drive of 5 or 6 miles we come to a creek with holes of water standing along in it, where we camp, having met 18 or 19 heavy teams consisting of 6 or 7 yoke of cattle each, with two wagons to the team. They were going, some to the Ute Agency, some to Salt Lake and some to other places. Above us on the creek is a hay and stock ranch.

September 5. After a good half days drive we come to water by following up a dry creek for a half mile, on the head of which is a sawmill and a sheep ranch. They have 3000 sheep, which passed our camp after dinner. P. M. Have a drive of 10 mi. without wood or water, so take some of each and go out about 4 miles and strike a dry camp in a nice, smooth, rolling country, with sandy soil and much gravel, covered with a short, dry, sand grass that furnishes food for myriads of antelope, but having plenty of beef we do not bother the antelope much. We let them feed along within a few hundred yards of camp.

September 6. Six miles brings us to the Little Laramie River, where we noon. Have already

¹⁷ Apparently this explanation was inserted by the author at a later time.

passed Cooper and Steamboat lakes several miles to our left. They extend east and west or up and down the plains. There are quite extensive settlements along the river. They seem to be principally engaged in stockraising, I infer from the number of cattle scattered over the plains, and the gigantic ricks of hay that are being erected. Their hay harvest seems to be in full blast. I noted four mowing machines in one field, follow each other not 100 yards apart. I see no gardens. It is probably too cold for vegetables or grain. P. M. Have another drive of 14 mi. without wood or water, so we load up as usual for those trips, go out about 5 mi. and strike a dry camp. Sage brush does not thrive in this country else we should have plenty of wood. This article of fuel which furnishes travelers with brilliant fires on the plains of the western states is not found much east of the Rockies.

September 7. Three miles brings us within sight of Laramie City, 6 mi. farther on. Three miles more and we stop at some lakes off the right of the road, so we have water sooner than we anticipated. Orders are to lie here till tomorrow and to cut out all the steers of our herd and put them in Clark's herd, which Cox now takes charge of. Clark taking charge of the cows lies here until the other herd arrives when Clark takes charge of all. We are lying over again without wood and with poor water. Have to burn "buffalo chips" for fuel, which by the way are quite plentiful. Shadley is out again.

September 8. After exchanging herds and bidding good-bye to the other boys, we drive down to the city for supplies. It is the largest and most important town we have met with since leaving the railroad for Oregon. It has a foundry [*sic*], a rolling mill, and several other manufacturing plants; prints a daily and weekly paper (The Sentinel) and some others. There are also many other large firms and fine stores, with probably 4000 to 6000 population. I was very much disappointed when I inquired for my mail, to hear the post master say "There is none." The herd strikes the river about a mile above here (which by the way flows in a northerly direction) where we drive and noon after getting our new supplies. Lost Shep in town and am not sorry about it, though the Boss and some of the boys greatly mourned his loss. P. M. After 27 mi. more our cooking and cattle driving will be at an end. Twelve miles to the next water. Drive out about 5 mi. and strike a dry camp, having crossed the railroad between the fort (Sheri-

dan) and town. We now strike out into the Black Hills, camp tonight on the foot of them.

September 9. There is but little travel on this road which goes through Cheyenne Pass there being more travel on the wood roads. Vidito and I mistook one of these wood roads for the true road (the herd going right) and went about 12 mi. to get 7, reaching the summit $1\frac{1}{2}$ or 2 mi. off the right road where our trail played out, leaving us to find our way along the divide through rocks, brush, and bluffs to the road, which we did after some difficulty. The herd followed Poll Creek, the first water after crossing the divide, down about 2 mi. and had been in camp some time when we overtook it. The hills have considerable scattering timber on them, principally scrub pine, with thick patches of fir on the steep sides of the canyons. Passed two wood camps where they were engaged in chopping wood. Saw several teams hauling wood. Here where we noon the Cheyenne road crosses the Poll and goes over to and down Crow Creek to the city; which, by the way is not our road for we go down this creek. P. M. Go back into the road and follow down the ridge about 5 mi. and strike a dry camp among great quantities of the best pitch wood, and you may be sure that we had some "rousing old fires," for the temperature is much lower than we have had [for] some time, and a large fire does not feel uncomfortable if one keeps a sufficient distance from it.

September 10. Everyone has something to say about the cold when he gets up, for we drive from the "bed ground" and they have to crawl out to breakfast earlier than common. After a drive of 6 mi. over some very rough and rocky road, we come to a nicely situated stock and milk ranch which is well kept by a man and his family among whom are several big girls. We also passed a milk ranch soon after we started this morning. Passing below this last stock and milk ranch, one and $\frac{1}{2}$ mi. off the road, we noon on the creek. A herd of elk was seen a ways down the creek, which, I suspect are not strangers in this region. They were not molested. P. M. Struck out to the road again and after a drive of 5 mi. came down onto the creek, filled up the barrel and went out a couple of miles and struck a dry camp without wood or grass. Came near having a stampede. About time to go to bed the horses took fright and started into the herd, but were warded off by the herder, (L. D.) and when they turned they ran through camp and caused all the picketed horses to break loose, one

of which was caught. Had not L. D. stopped the cattle we should have been left with but two horses. Luckily all were stopped and the saddle horses secured.

September 11. A drive of 8 mi. brings us to the Black Hills and Cheyenne stageroad, 18 mi. from Cheyenne, where we expect to be relieved, by Shadley's cowboys. Failing to arrive as we expected, we were obliged to go on to Hillsdale where we next strike the railroad—a distance of 20 mi which we did to our regret, but were determined to go no farther. Mr. George Shadley, and third brother and partner in the firm, is out today in a carriage. He came to settle up with us and agreed to meet us tomorrow with the money and his men. There are a great many sheep along this creek which have the grass pretty well eaten out. Passed one herd back a little ways and there is one on the creek below us of about 2300 head. I should have said that the road through here to the Hills has a telegraph line just completed. P. M. This is such a dry country through here that the water in the creek sinks and is seen only in places so we fill up the barrel and after a drive of about 6 mi. strike a dry camp on the hill without grass or wood, except "buffalo chips."

September 12. Up at 3:00 o'clock and have breakfast at daybreak, for we were driving from the bed ground again this morning. About daylight a fog began to settle down upon us, so that it was impossible to see more than 100 yards, which made horse hunting rather a poor business, and, although two men were after them, they were not found till the fog had partially cleared away, which was about 9:00 o'clock. Another sheep corral just above us on the creek. Overtook the herd grazing about 3 mi. from camp, and 10 mi. further found waiting the expected paymaster and the cattle drivers that are to succeed us, with their colored cook, who is to take my place. He was soon into the breadpan up to his elbows and we had dinner about 3:00 o'clock. P. M. After dinner we all received due compensation (?) for our summer's work. I received \$145.00, amount of wages and money loaned after deducting all counter claims. It was so late in the day that all concluded to stay one more night. I helped about loading and hitch-

ing up, and we went out about a mile and made a dry camp. I am like that little darky now, "T'se free nigger" so don't do much but sit around.

September 13. Did not get up till after daylight, something very uncommon for this boy, and partook of considerable breakfast not cooked by myself, consisting of bread, bacon and beans, all poorly cooked. After breakfast we sat around till late, than bade good by to the boys remaining with the herd and took our leave on foot for the station one and $\frac{1}{2}$ mile distant, Jeff, L. D. and I. The other three who were leaving, have horses and rode them back to the city. Shadley had agreed to pay our railroad fare back to Cheyenne. So we are now at the station waiting for the train which is due at 11:00 o'clock. Here is a section house, telegraph office and water tank 20 mi. from Cheyenne. About half past 10:00 we jumped aboard a freight and landed in the city about 2:00 P. M. fare \$1.00. Took a square meal at Ocean Wave restaurant for .25 cents, after which took a shave, a shampoo and a bath, and put on some clean clothes. I left my watch at a jeweler's and wandered around through town the balance of the day, looking at the curiosities and works of art. Cheyenne is quite a large, flourishing town of probably 8,000 population and is the most convenient shipping point for the Black Hills. It is connected with Custer City by a mail and stage rout[e] and telegraph. We cannot get a train today, so lay over till tomorrow.

September 14. We remain here in Cheyenne till 3:00 P. M. when we take the train for Omaha.

The following is added from other sources.

I paid \$24.00 for my railroad ticket from Cheyenne to Omaha and \$9.25 for a ticket from Omaha to Keokuk. Reached Omaha Sept. 15, and reached Keokuk the 16. Walked across the Mississippi on the bridge and out to our uncle James Irwin's place on Sept. 16, having been gone from Illinois just four years to a day.

September 17. Uncle James and Cousin Ed took us to the old home place where we found mother, the two half brothers, Ruby and Hugh, and our old Grandmother Irwin who were "tickled to death" to see us, and were we glad to get home again!!!

THE WAR OF THE SUBSTITUTES: THE REACTION OF THE FOREST INDUSTRIES TO THE COMPETITION OF WOOD SUBSTITUTES

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The forest products industry entered the twentieth century as the fourth industry in the United States, surpassed in value of annual production only by iron and steel, textiles, and food processing.¹ With the coming of the new century, however, this commanding position in the American economy was threatened and eventually undermined by a series of complex problems unanticipated in the halcyon days of the preceding century and unpredicted by the prosperity that had accompanied the exploitation of the Great Lakes States pineries.

The first two decades of the century were years of stress, demanding constant adjustment on the part of forest products industries. Lumbermen were under vigorous attack from many quarters. Anti-monopolists labeled them "lumber barons" and filled newspapers and magazines with sensational evidence exposing a "lumber trust." Conservationists charged them with devastating America's forests and accused them of wasting an exhaustible and valuable resource. Catalog and mail-order houses presented retail lumbermen with new and costly competition, and poachers badly demoralized the trade by ignoring sound marketing practices and by disregarding accepted trade ethics. While under these frontal assaults, the industry awoke to the existence of a flanking movement that threatened to capture the market for wood products and destroy the prosperity of retailer and manufacturer alike. This new and most serious threat of all appeared in the introduction and widespread use of substitutes for wood.

¹ This article was presented at the meeting of the Forest Products History Foundation with the Mississippi Valley Historical Association at Madison, Wis., on Apr. 16, 1949. It is a summary of a research project of the Forest Products History Foundation at the Minnesota Historical Society, St. Paul.

The ranking of industries in the first sentence is derived from the U. S. Census Office, 12th Census, 1900, *Manufactures*, 7(1):clxiii-clxiv (Washington, 1902).

² *Lumberman's Gazette* (Bay City, Mich.), 21(19):2-3 (Oct. 25, 1882).

The introduction of wood substitutes, of course, was not entirely a new experience. Frequent attempts were made during the nineteenth century to find suitable substitutes, and as early as 1882 the *Lumberman's Gazette* expressed concern over the probable effects of these innovations.² It was the striking advance in applied science during the late nineteenth century, however, that created the new materials and found additional uses for old ones. By 1900, most lumbermen were ready to admit that steel and cement were formidable competitors and that wire fencing, prepared roofing, cement sidewalks, fiber boxes, steel railway cars, metal furniture, and asphalt or concrete paving promised to cut deeply into the consumption of wood.³

Statistical evidence of this development is impressive. The per-capita consumption of lumber declined steadily after reaching its zenith in 1905. In striking contrast was the enormous increase in the use of cement which jumped from 20 million barrels in 1901 to 90 million in 1913.⁴ This record so impressed the secretary of the Northern Pine Manufacturers' Association that he warned his colleagues of the danger and observed: "No industry in our history has shown such a remarkable growth as this."⁵

More to the point was the testimony of three thousand Midwestern retail dealers who informed the United States Forest Service that in their estimation between 1907 and 1914 they had lost 42 percent of their fencing trade, 35 percent of their shingle business, 15 percent of their siding, and 14 percent of their flooring trade to substitute materials.⁶ Ample statistics exist to indicate the kinds and quantity of substitution during these

³ Northern Pine Manufacturers' Association, *Proceedings*, 1907, 39.

⁴ Rolf Thelen, *The Substitution of Other Materials for Wood* (U. S. Department of Agriculture, Report 117, Washington, 1917).

⁵ Northern Pine Manufacturers' Association, *Proceedings*, 1907, 39.

⁶ Thelen, *The Substitution of Other Materials for Wood*, 22.

years. Our problem is not to investigate this phenomenon but to examine the reaction of the forest products industries to the threat it presented. How does a major industry behave when it faces such a threat—whether imagined or real? How do leaders in that industry adjust their enterprises to the changing conditions? These are the questions that concern us here.

Substitution and keen competition were old problems in the lumber trade. For many years a ruthless competition and a bitter rivalry had existed between species of wood and between regional producers. The well-known struggle between northern white pine and southern yellow pine producers for supremacy in Middle Western markets was only one of several such trade wars within the industry. These experiences left deep scars and made industry-wide cooperation difficult when wood itself faced competition from substitute materials.

Were wood substitutes really a menace to the lumber trade? This was the first question that confronted lumbermen as they sought to understand the role of the new materials. Until the depression of 1907 demoralized the industry, there was little agreement on this crucial issue. Many lumbermen, in fact, turned deaf ears to the first warnings. Some argued that wood substitutes had a legitimate place in the trade and that the increased use of stone, steel, cement, and other materials was not harmful to their interests. This view, for obvious reasons, was embraced more readily by retail lumbermen than by manufacturers. The *American Lumberman*, the most prominent trade journal at the turn of the century, at first ridiculed the idea that substitutes threatened the stability of the industry. "No one would dispute that these substitutes cut into the sales of lumber," argued the *Lumberman*, but little room for complaint really existed, for "Were there no substitutes, it is doubtful if at present . . . the demand could be met."⁷

A more convincing argument, and one that silenced much of the agitation, was the belief that the increased use of substitutes saved America's dwindling forests. Thus the purposes of conservation were served with the increasing use of wood substitutes. J. E. Rhodes, long a spokesman for white pine producers, was convinced that "the minerals of the continent are inexhaustible; the products of the soil are grown each year, but the

present is the last crop of trees."⁸ The force of this argument was thoroughly appreciated by a generation just awakening to the rapid disappearance of America's forest resources. The conservation argument was heard so often that alarmists in the industry suspected that the plea was deliberately circulated by the steel and cement interests to discredit the universal use of forest products.⁹

Many lumbermen, moreover, were unmoved by the fear of substitutes for they considered other enemies more dangerous to their welfare. The mail-order house was universally resented as a ruthless and dangerous competitor which asked and gave no quarter in the grim struggle for local markets. Lumber trade journals vied with each other in exposing the evils of the "cat houses" and were full of suggested programs to defeat this powerful enemy.¹⁰

Railroads were also condemned for their discriminatory rates against lumber and forest products. Transportation rates and adequate supplies of freight cars were so important to producers that one of the major functions of the trade associations was to protect the lumbermen's interests against the railroads. The complaints of the lumbermen sound surprisingly like the farmers' grievances against the railroads during the same years. The *American Lumberman* was outspoken in denouncing the greed and indifference of the railroads and on occasion grew so eloquent that it was moved to poetry:

Behold the honest lumberman!—
Most ev'rybody tries to do him.
The railroads seldom give him cars
And, when they do, they soak it to him.¹¹

The *Lumberman's* crusade against the railroads grew so vehement that the *St. Louis Lumberman*, ever anxious to catch its Chicago rival sinning, accused the journal of joining the socialist movement.¹²

⁸ Northern Pine Manufacturers' Association, *Proceedings*, 1907, 40. See also *Lumber World Review* (Chicago), 29(6):36-37 (Sept. 25, 1915).

⁹ *Hardwood Record* (Chicago), 40(1):17 (Apr. 25, 1915), 41(11):15 (Mar. 25, 1916).

¹⁰ For examples, see *American Lumberman*, Mar. 30, 1907, p. 35; *Mississippi Valley Lumberman* (Minneapolis), 43(46):30 (Nov. 15, 1912); and *St. Louis Lumberman*, 39(4):57-58 (Feb. 15, 1907).

¹¹ *American Lumberman*, Sept. 28, 1907, p. 38.

¹² *St. Louis Lumberman*, 41(2):65 (Jan. 15, 1908).

⁷ *American Lumberman* (Chicago), May 4, 1907, p. 31.

Pine producers of the upper Mississippi Valley seldom shared the growing fear of substitutes that seized southern and western manufacturers. A heavy percentage of their number had nearly exhausted their holdings of merchantable timber and were reluctant to admit any great interest in the increasing use of wood substitutes.¹³ They had slight sympathy for the plight of southern pine manufacturers whose severe competition they resented and whose practice of dumping yellow pine into their markets at ruinous prices they never forgave.¹⁴

The sharp depression of 1907 destroyed much of this apathy. Unlike the rest of the economy, the lumber industry suffered the blighting effects of the depression for several years. Trade associations urged their members to reduce production in the hope of ending the prolonged distress, but many lumbermen typically increased their cut to offset the declining prices.¹⁵

The depression forced lumbermen to search for the causes of their distress. This search revealed numerous explanations, including overproduction, overspeculation in timberlands, and a decreased per-capita consumption of lumber. The declining use of lumber led to a widespread, almost universal, acceptance of the view that substitutes were chiefly responsible for the condition of the lumber market. The *Lumber World Review* of Chicago led in exposing the iniquities of substitutes and dramatically declared war on substitute materials. This "War of the Substitutes," as the *Review* called it, quickly spread throughout the industry and within a short time most of the trade journals were recruits in the battle, freely shedding their ink in the cause of wood.

In 1911, the *American Lumberman* reversed its earlier position and energetically joined the crusade in an editorial captioned "Substitution—An Evil That Calls for Action" and admitted that "lumbermen . . . are fairly well agreed on the proposition that substitution is one of the chief causes of the unsatisfactory price situation that has prevailed

for about four years."¹⁶ Only the *Mississippi Valley Lumberman* remained aloof from the struggle. Its policy was dictated by the fact that the white pine producers had cut themselves out of business and its readers were now retailers who were selling substitutes in their yards.

The *Hardwood Record*, spokesman for a phase of the industry especially hard-hit by substitution, discovered what it thought was a conspiracy by the steel and cement trusts to ruin the lumber trade. More than this, the *Record* was convinced that the influence of the money trust was to be seen in this conspiracy and forthrightly announced to its businessmen readers that "The result of Morganizing American business is growing worse and worse as time advances, and the only relief from this condition is through such a political upheaval coming about that the continuance of the pernicious methods employed by the money trust shall not be permitted."¹⁷ Here, indeed, was fodder for the Bull Moose.

The growing realization of the danger from substitutes led lumbermen to seek methods of combating their use, and lumbermen's conventions, trade association officials, and trade journals proposed numerous solutions. Retail lumbermen, for example, were urged to discontinue the sale of substitutes with the promise that a greater profit lay in the handling of wood. The *Hardwood Record* challenged its readers "to stand up for lumber and persuade their customers to take it and let the sham substitutes alone."¹⁸ To hard-pressed retailers this was a counsel of perfection.

More discerning critics urged the industry to invest in research projects to determine scientifically the potentials of wood and to remedy its weaknesses. Through the years this movement proved to be the most important result of the War of the Substitutes. Forest products manufacturers were forced into chemical research and were given invaluable assistance in the laboratories of the United States Forest Service.

Lumbermen were cautioned to forget petty differences and cooperate in the face of the threat that confronted them. The trade associations and journals preached cooperation at every opportunity with the result that much of the individualism and bitter rivalry that had characterized the

¹³ H. S. Childs to L. L. Barth, Dec. 4, 1913, in the Northern Pine Manufacturers' Association Papers at the Minnesota Historical Society.

¹⁴ Northern Pine Manufacturers' Association, *Proceedings, 1909*, Report on Market Conditions.

¹⁵ The Yellow Pine Manufacturers' Association voted to curtail its production in November 1907, and most of the other associations followed this lead.

¹⁶ *American Lumberman*, Sept. 16, 1911, p. 29, Sept. 23, 1911, p. 28.

¹⁷ *Hardwood Record*, 33(5):23 (Dec 25, 1911).

¹⁸ *Ibid.*, 37(1):15 (Oct. 25, 1913).

industry gave way before the necessity of presenting a united front to a common enemy. Behind the scenes the industry worked in close harmony with allied interests such as the American Architects' Association, the National Fire Protection Association, the National Association of Paint Manufacturers, and similar organizations.¹⁹

But the solution that held the widest appeal was the plea to advertise. This proposal was popular for it was based on the naive belief that substitutes were widely used as a result of a well-organized and well-financed publicity campaign that had seduced a gullible public away from wood. Lumbermen were quick to accept the ready explanation that substitutes producers had successfully sold their products through effective publicity and not through any merit in the new materials.

The advertising committee of the National Lumber Manufacturers' Association emphasized this in its 1912 report and revealed that their competitors had invested over \$3,000,000 annually in advertising since 1904 "to induce our old customers not to use any more lumber."²⁰ A further analysis of substitutes advertising by the Southern Pine Association in 1914 revealed that in eighteen general publications steel producers purchased 23 percent of the advertising space, prepared roofing secured 20 percent, brick and tile 15 percent, while lumber, shingles, and all other wood products purchased only 6.5 percent.²¹ These statistics confirmed the widespread belief that lumbermen had failed badly in selling wood to the public.²²

Leaders in the industry reproached themselves for remaining silent while the substitutes interests had organized a significant educational campaign. The *American Lumberman* considered their efforts extremely important for "These interests are well organized and have ample appropriations to carry on their educational work. . . ." ²³ The effectiveness of the advertising for substitutes was widely heralded throughout the lumber industry, and the ingenuity and energy with which it was executed were universally deplored. Substitutes salesmen were accused of possessing an unlimited slush fund

and of overlooking no opportunity to spread their gospel, even to the point of placing biased textbook material into the hands of the Nation's school children.²⁴

Though lumbermen openly confessed an admiration for the efficiency of the substitutes campaign, they bitterly resented what they believed was a misrepresentation of their product and an exaggerated claim for the substitute materials. Though quick to admit that they had much to learn from their rivals, they denounced as dishonest the campaign that publicized the virtues of substitutes. Typical of the charges which aroused their ire was the famous slogan of a roofing company: "The shingle roof is not a covering, but a crime."²⁵ In desperation the *Lumber World Review* finally was led to ask: "Do the 'Substitute' People Ever Tell the Truth?"²⁶

The defense of wood began in earnest in 1909 when the Southern Cypress Association advertised the virtues of cypress, "The Wood Eternal." The program was completely successful and was quickly followed by campaigns on behalf of red gum, birch, hemlock, white pine, western fir, yellow pine, and other species. These campaigns were invariably directed by professional advertising firms, and the John B. Crosby Company of Chicago was particularly successful in securing contracts from lumber associations following its aggressive campaign for cypress.²⁷

These publicity drives were financed through direct assessments upon manufacturers and often raised substantial sums. The Northern Pine Manufacturers' Association assessed its members \$25 per million board feet to cover the costs of its advertising in 1912, and the cypress association levied a direct assessment of 25 cents a thousand feet to underwrite its campaign of 1915.²⁸ The publicity was aimed at the general consumer through pamphlets and advertisements in rural newspapers, farm journals, and magazines of

²⁴ Address by A. T. Gerrans before the North Carolina Pine Association at Atlantic City, Aug. 18, 1915, in the *Lumber World Review*, 29(5):24-27 (Sept. 10, 1915).

²⁵ George H. Holt, "Is Lumber a Crime?" *American Forestry* (Washington, D. C.), 18:647 (October 1912).

²⁶ *Lumber World Review*, 26(4):19-20 (Feb. 25, 1914).

²⁷ Northern Pine Manufacturers' Association, Minutes of Board of Directors, Nov. 14, 1911, 34-35.

²⁸ *Ibid.*; *Lumber World Review*, 27(11):31 (Dec. 10, 1914).

¹⁹ J. E. Rhodes to H. S. Childs, Jan. 26, 1914, in the Northern Pine Manufacturers' Association Papers.

²⁰ *Lumber World Review*, 22(1):21 (Jan. 10, 1912).

²¹ *Ibid.*, 28(10):32 (May 25, 1915).

²² William Carson to F. S. Bell, Oct. 18, 1916; and F. S. Bell to William Carson, Oct. 19, 1916, in the files of the Laird-Norton Company, Winona, Minn.

²³ *American Lumberman*, Sept. 2, 1911, p. 29.

general circulation as well as in the regular trade journals.

The campaigns were criticized as unwise and unfair, however, since they advertised the virtues of particular species and not of wood in general. To remedy this defect, the national association inaugurated a comprehensive campaign in June 1911 on behalf of all wood. This national drive was financed by contributions from member associations and was energetically conducted by a committee of prominent lumbermen under the able leadership of A. T. Gerrans.

The propaganda objectives of this nationwide campaign were fourfold. The national committee proposed to convince the American people that timber resources were not yet exhausted and were not likely to be depleted in the foreseeable future; that the price of lumber was not exorbitant and was not controlled by any combination or trust; and finally that it was not a crime to use wood rather than a so-called fireproof substitute.²⁹ This was an ambitious program, and the committee was authorized to begin its work with a minimum of \$100,000.

The resulting campaign was markedly successful. It attracted so much attention that it was seized by critics as further evidence of a "lumber trust" backed by unlimited funds. Actually, the advertising committees complained bitterly of lack of support and were sometimes so short of funds that they had to rely on individual subscriptions to prevent a collapse of their programs.³⁰

The educational campaign of the lumber industry did more than advertise the virtues of wood. A "Build Now" campaign was launched in 1908 to stimulate construction and help lift the industry from the depression that had paralyzed it. The most ambitious single project of the campaign was the Forest Products Exposition held in Chicago and New York in 1914. This vast show displayed the kinds and varieties of wood and demonstrated their uses under modern conditions. The *Lumber World Review*, author of the exposition plan and tireless advocate of its adoption, hailed it as the leading event in the war on the substitutes.³¹ Again, however, as with the advertising program, the impression was created that the industry

possessed a slush fund for propaganda work, and the "lumber trust" once more received unwanted publicity in the daily press. A positive benefit did result in the creation of the Forest Products Federation—a permanent clearinghouse for the industry's educational and propaganda work.

An important phase of the struggle against the use of substitutes was the campaign to defeat anti-shingle ordinances and zoning laws that limited or prohibited the use of wood products. Lumbermen's organizations were able to exert sufficient influence to defeat such legislation in many cities. These were only temporary victories for the current of public opinion was too strong to resist.

The campaign also sought to discredit the substitutes. This strategy of abuse was especially aimed at the steel railway car, an innovation that worked a particular hardship on the hardwood industry. The steel car was branded a "death trap" that lacked the strength, economy, comfort, and artistic beauty of the wooden coach. "The all-steel car is a sop to a fickle public—a public influenced by superficial evidence and without time or desire to investigate," cried the *Hardwood Record*. As striking evidence the *Record* pointed to the fact that "a great many of the cabooses constructed for housing freight crews while on the road were of wood, which would indicate that those men who make the caboose their home seriously object to living in prison cells."³²

Similar arguments were directed against other substitute materials. Cement walls were damned as dangerous and liable to collapse; metal furniture was ridiculed as cold and inartistic. Businessmen were warned, moreover, that nervous breakdowns frequently accompanied the use of the steel desk, and evidence was produced to prove that the incidence of tuberculosis was higher in stone houses in England than in wooden homes. The transition to the steel automobile was resisted with many of the same arguments that denounced the all-steel railway coach. The all-metal automobile was characterized as a "stovepipe" body inferior to "the substantial, durable and thoroughly tried-out wooden bodies."³³ No substitute was immune from the attack. Even iron toys were exposed as "dangerous playthings" by the Southern Pine Association.³⁴ The strategy of abuse was clearly a

²⁹ A. T. Gerrans to Bolling Arthur Johnson, May 14, 1912, in *Lumber World Review*, 22(10):13, 14 (May 25, 1912).

³⁰ L. L. Barth to H. S. Childs, Dec. 3, 1913, in the Northern Pine Manufacturers' Association Papers.

³¹ *Lumber World Review*, 26(9):45 (May 10, 1914).

³² *Hardwood Review*, 39(6):15 (Jan. 10, 1915); and *ibid.*, 42(1):19 (Oct. 25, 1916).

³³ *Ibid.*, 33(2):22 (Nov. 10, 1911).

³⁴ *Lumber World Review*, 29(10):35 (Nov. 25, 1915).

measure of desperation and was the least effective step taken by the industry in the defense of wood.

The coming of World War I in Europe ended the War of the Substitutes in the United States. The crisis in Europe brought a strong market and high prices for forest products which turned the industry's attention from the inroads made by the substitutes. By February 1915 the *Lumber World Review* admitted that the struggle with the substitutes was finished: "The 'War of the Substitutes' has served its purpose. We will now, for a time, cultivate the Arts of Peace and of that CONSTRUCTIVE work which is the way of all gentility."²⁵

When a depressed market returned in the twenties, the *Lumber World Review* once more sought to

²⁵ *Ibid.*, 28(4):18 (Feb. 25, 1915).

lead a crusade against the substitute materials. This appeal failed, for the industry had now turned to research in wood utilization and to the solution of technical problems in fire resistance, preservation, and durability. True, trade extension divisions of the lumbermen's associations continued to worry about substitutes, but never again did they attempt to destroy their rivals by declaring war on them. Lumbermen faced the realization that though forest products still had many uses, the abundance of forest resources in North America had made possible the wooden cities and farmsteads of the Middle West. But in the twentieth century, lumber was no longer the cheapest and most convenient material available. The Age of Wood had given way to an Age of Steel and Cement.

THE MARKETING HISTORY OF COLOMBIAN COFFEE

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I

In the course of the last seventy-five years, the Republic of Colombia and the United States of America have become closely joined by the economic tie of coffee.¹ Every morning the average American gulps down a little of Colombia's soil that has been transformed on Andean hillsides into a chemical combination of caffeine, ash, fat, and fiber; dehydrated in American roasting plants; and brewed on the family stove. The name of the beverage—*galveh*—originated in Turkey, but the product itself comes largely today from Latin America. And most blends carry at least some of the Colombian beans.

An American interest in the Colombian coffee industry commences naturally with an inquiry into the origins of Colombo-United States coffee trade. It starts with the Boston and New York sailing vessels that weighed anchor at Cartagena and Santa Marta in the middle nineteenth century to make their northward crossing of the Caribbean Sea. But such an investigation of the coffee trade

leads one on—into the mountainous interior of Colombia where the movement of coffee begins. It leads one ultimately to the steep Andean slopes where the small *finca* and large hacienda have produced that standard high quality coffee now long well known on the New York market.

A historical account of the methods by which the coffee of Latin America has been conveyed from grower to drinker has never (to my knowledge) been related. Yet such an account is important not simply for its own sake, but also since it represents in wide respects the internal growth of marketing arrangements in other areas of Latin American economic development—beyond the limits of Colombia and outside the coffee industry.

II

The method of marketing Colombian coffee has evolved under the influence of three distinct features of the industry.

The first of these features is that coffee in Colombia has been identified, ever since the beginning of its vigorous expansion about 1885, with the very economy of the republic. From that time until the present day, coffee has not only stood first on the export list but has generally repre-

¹ This article was presented at the session of the Agricultural History Society with the American Historical Association at Washington, D. C., on Dec. 30, 1948.

sented over 50 percent of the total Colombian exports. The per capita production of coffee has risen in Colombia from 2 pounds in 1870 to 33 pounds in 1946.² Economic growth and decay, prosperity and depression have found their origins in the coffee industry. The very rhythm of Colombia's economic life as measured by business activity has followed the seasonal pulsations of the coffee harvests.

A second characteristic of the Colombia coffee industry has been the increasingly important role played by the United States as a foreign market. Whereas in the nineteenth century, the German and English markets rivaled closely that of the United States, the twentieth century has witnessed

consumed 19,394,000 bags, Colombia provided 25 percent. All coffee imported into the United States in 1946 represented a value nearly twice that of any other single commodity import, agricultural or nonagricultural. And coffee from Colombia alone closely rivaled the sugar imports of the United States from all the world.

The evolution of the system by which coffee has been marketed reflected these three important features of the industry: (1) The importance of coffee in Colombia's economy accounted for the

TABLE 1
Percent of Total Colombian Exports Represented
by Coffee

Year	Percent
1874	22
1896	55
1899	38
1913	52
1922	70
1938	52
1944	75

Sources. The percentages are based on 3-year running averages. The value figures of coffee exports, 1874-1922, are from *Revista del Banco de la República*, 1(11):298 (Aug. 15, 1928). The figure for 1938 is from L. B. Ortiz, "El comercio internacional de Colombia," *Anuario de comercio exterior de 1943*, introduction. The 1944 figure is from *Anuario general de estadística 1945*, 278. The value figures of total exports, 1874-1899, are from *Comercio exterior de la República de Colombia*, 1916, ix-x; and for 1913-1938, from *Anuario de comercio exterior de Colombia de 1943*, x.

the complete domination by the North American consumer.

The third feature is the increased reliance of the United States upon Colombia as a source of coffee supply. Although general coffee consumption in the United States has risen notably in the past seventy-five years, the proportion coming from Colombia has increased even more. In 1874 when the consumption of the United States was in the neighborhood of 2,030,000 bags of 60 kilograms, Colombia supplied only 2 percent of the amount needed; while in 1944 when the United States

² The population data are from *Anuario general de estadística*, 1940.

TABLE 2
United States Imports of Colombian Coffee for
Selected Years, 1874-1938

Year	Bags (60 kilos)	Percent of Total U. S. Coffee Imports	Percent of Total Colombian Coffee Exports
1874-75	41,000 ¹	2 ¹	35 ⁷
1896	146,000 ²	3 ²	31 ⁸
1899	213,000	3	35
1913	660,000 ³	10 ³	65 ⁹
1922	1,453,000	15	82
1938	3,424,000	23 ⁴	80
1944	4,856,000	25	95 ¹⁰

Sources. ¹ Delden Laerne, *Brazil and Java* (London, 1885), 413. ² Great Britain Board of Trade, "Tea and Coffee, 1903," Eyre and Spottiswoode, London, 11(1):47 (House of Commons Paper 304). ³ Federación nacional de cafeteros de Colombia (FNCC), *Boletín de estadística*, 7:82 (Nov. 1946). ⁴ Total imports from Francis Thurber, *Coffee from Plantation to Cup* (New York, 1881), 227. ⁵ Total U. S. imports in rounded figures from *Boletín de estadística*, año 4, 3:367 (June 1935). ⁶ Total U. S. imports for consumption from the Pan American Coffee Bureau, *Estadísticas cafeteras*, no. 654 (Mexico, 1945). ⁷ Total Colombian exports from *Anuario estadístico de los Estados Unidos de Colombia, Parte segunda*, 1876. ⁸ *Boletín de estadística*, año 3, vol. 1, Jan. 1934. ⁹ *Ibid.*, año 11, 5(25):66-68 (April 1944). ¹⁰ *Anuario general de estadística* (Bogotá), 1945.

part played by coffee in the development of banking, in the import-export business, and in the business life of the small community; (2) the increasing importance of the United States market to Colombia accounted for the establishment by Colombian coffee exporters of agent offices in the United States; (3) and, finally, the increasing importance of Colombia as a source of coffee supply for the United States accounted for the establishment in Colombia of buying agencies by United States coffee importing concerns.

For various reasons, both countries came in time to find a growing mutual advantage in the regular movement of Colombia's coffee crop to the United States. The question for history to decide was how that movement of coffee was to be effected: who was to finance it; who was to control it; who was to profit by it. The coffee industry is unlike most Latin American industries in that it began and developed by almost exclusive reliance on native capital. With only minor exceptions, coffee farms in Colombia have always rested in the hands of Colombians. Thus it was not a foregone conclusion that the marketing of Colombian coffee should be controlled by United States or other foreign interests. What has happened, in fact, is that Colombian exporting firms and United States importing firms have vied with each other in their attempts to control the marketing system. Since 1900 Colombian exporters have experienced varying degrees of success and failure in their ventures into the New York market; while New York concerns have extended their organizations down into the small coffee communities of Colombia. The front on which American and Colombian capital competed has continually moved but still occupies a fairly midway position. If any advantage is held, it favors the Colombian coffee interests.

III

The marketing system by which Colombian coffee has been moved from the *finca* of the small producer or the hacienda of the large producer to the New York warehouse was a system that grew without plan under the influence of the world market and especially the vicissitudes of Colombian economic life.

Coffee farms varied in size during the nineteenth century just as they do today. According to the 1932 census, about 49 percent of the coffee trees in Colombia grew on *fincas* of 5,000 trees or less, which represent definitely small plantings of a maximum of 6 or 7 acres. Fourteen percent of the trees were growing at that time on haciendas of 50,000 trees or over, which can be conveniently grouped within the class of large haciendas. Intermediate-sized farms accounted for the remaining percentage. Since the positions of the small *finca* (tilled by the generally illiterate peon) and the large *finca* or hacienda (owned and managed by the educated *hacendado*) were widely different, it is

proper to take separate notice of each in beginning an examination of the marketing system.

The small producer sold his coffee crop either in the nearest town market or to a large neighboring *hacendado*. If the local market were a relatively large town, he would likely sell to an export-import house. If not, he sold to any merchant who would handle the coffee, whether he had a dry-goods business, food provision store, or a crude little *tienda* which dispensed *aguardiente*, *chicha*, and in later times beer. Somewhere in the central square of the pueblo and probably in more than one shop, the peon's few bags were accepted, lifted from the back of the burro, and stored. He was paid largely in credit against future purchases (or past debts) and partly in cash. His deliveries of coffee were concentrated during the two harvest periods, but small off-season deliveries (several bags in a month) made it possible for him to sell to several different proprietors in town. Thus he was able to establish local credit according to his needs, and the use of money, so scarce in that day, was avoided.

Small producers likewise sold coffee to the owners of nearby large haciendas. The small tenant was often obliged to sell to his master proprietor, but the small independent producer also frequently sold to the *hacendado*.

Both the town merchant and the *hacendado* performed the same function in this situation; they provided the credit for the small grower. Today they still do to a large extent, but in the nineteenth century when money was so scarce that it can hardly be said that a money economy existed, the small producer was able to barter his coffee for his bare necessities through these two marketing mediums.

There was another function that was performed at this second stage in the marketing process—the cleaning of the coffee. Although all coffee that leaves Colombia today is cleaned coffee (*café pilado*), in the nineteenth century some was shipped as parchment coffee (*café pergamino*, still encased in a thin paper-like shell). Coffee was sold in parchment by the small producer because he was generally unable financially to provide himself with the machinery necessary for threshing. A few, it is true, managed to erect a crude *tahona*, an ox-drawn threshing wheel, but this was not common. Some small producers did not process the coffee at all but carried the fresh berries directly from the bushes to a large nearby hacienda where depulping machines and washing tanks carried out

the washing process. In the 1860s, for example, "Señor Marcelino Murillo . . . on the beautiful plantation of Tusculo, in Guaduas, set up in the settlement a processing establishment to which all the small cultivators of the neighborhood came with the fresh berry."³ In these uncommon cases the small farmer was able to share the price advantage carried by washed coffee over parchment. Generally, however, he sold his coffee in parchment, having dried the bean either by exposing it to the sun in an open patio or by the use of stoves.

Although the coffee of small producers, as already pointed out, was partly sold to large haciendas where it received necessary processing, most of the coffee was sold to independent traders in the town. In the course of time and especially after 1900, some of the more enterprising of the independent town merchants used their small capital to erect *trilladoras*, or coffee threshing and cleaning establishments. Here in the towns of the coffee regions, the coffee was threshed and bagged and made ready for export. Later on and especially after the First World War with the rise of the large export houses and the increased emphasis on improved cleaning and classifying, the system of the independent *trilladora* disappeared. Now it is the large nationally distributed export house that operates a series of *trilladoras* strategically distributed through the coffee regions. The large haciendas, which have normally hulled their own coffee, have been tending in later years to sell more and more of their coffee in parchment to the export houses for hulling. This trend has been due partly to the fact that the large growers' market has shifted from Europe, where coffee has always been rated according to appearance, to the United States where the "cup test" is the final criterion. Large hacienda owners, who long took special pride in the reputation of their coffees in the European markets for distinguished color or gloss, no longer had this incentive for performing their own hulling and cleaning. A second reason for this trend is that the large producers have been disinclined, for one reason or another, to comply with the requirements of recent labor legislation. Finally, the economy of large-scale operations found in most *trilladoras* has contributed to the concentration of coffee processing in its later stages.

The large producer in early times sold his coffee either to an exporter or exported it on his own account. That is to say, in the latter case he financed the movement of the coffee to Barranquilla or to

some Colombian port, selling the coffee to a foreign importer f.o.b. Colombian port. He was able to do this because he often owned the mules for transporting the coffee to the Magdalena River and was in good enough financial position—especially during periods of high coffee prices—to withstand the expense of river transport, handling, and insurance. He derived advantage in this way of establishing direct contact with European buyers and thus succeeded in making his hacienda "mark" known on the London and Hamburg markets. The foreign importer, in his turn, desired a personal connection with the Colombian coffee producer in order to have confidence in the quality of the consignment shipped.

IV

The appearance of the specialized coffee exporter dates back no further than about 1920. Prior to this time the coffee exporter was a general commercial house engaged in exporting and importing anything and everything. If one scans the lists of coffee exporting firms of the nineteenth century, he will find scarcely a single familiar name because every Colombian merchant who lived in the coffee areas or between the coffee areas and the coast and who traded abroad had to deal in coffee.⁴ Cash was scarce; credit was extremely restricted; banking facilities hardly existed in the largest cities; so that importers, operating with a limited amount of capital, were obliged to pay for their imports by actually exporting the goods against which their imports were credited.

The case of Hughes and Hughes Company may be taken as typical. Francis Hughes came from Wales to Honda in 1903 where, in company with Hywel Hughes, no kin, he set up a general export and import house. At the time that they began business, there was no bank in this important commercial river port. Customers for the imports that the Hughes firm brought from England lived in Antioquia, in Caldas, or in Cundinamarca; and they paid for their imports in the easiest way they could—with coffee. Mule trains came over the mountains from Manizales or down from the Cundinamarca slope burdened with coffee and prepared to carry back the imported goods for which the coffee was payment.⁵ In such a manner the

⁴ Invoice books of the United States consular officers in the National Archives, Washington, D. C.

⁵ Much of the information for this article was obtained by the author prior to and during his residence (1946-1947) in Colombia through interviews with indi-

³ Miguel Samper, *Escritos político-económicos*, 1:205.

Hughes firm became coffee exporters; and in a similar way all the early exporters of coffee began: Camacho Roldán, Parra, Pinzón, and the Santander firms of Van Dissel Rode, Rívoli, and Tito Abbo. Even Pedro A. Lopez and the relatively recent Ariztizabal became coffee exporters by necessity.

Some of these export firms developed to such an extent that they became important banking houses. That of Pedro A. Lopez is the outstanding example. The small and more typical firm of Hughes and Hughes Company preferred to confine business mainly to imports and to dispose of coffee receipts in Colombia. Thus they began to do business with Lopez, who was willing to handle the coffee and who at the same time possessed banking connections abroad. Lopez would sell Hughes a sizable draft on a London bank, the sale to be effected gradually as Hughes kept turning over his small receipts of coffee to Lopez in Honda and as the coffee was credited lot by lot to Hughes against the draft. Once deeply established in the business of buying coffee, firms like that of Lopez began to extend credit to important growers. In fact, the extension of credit from exporter to grower or from the small middleman to grower has been an essential part of the marketing system from earliest times. In Santander, it has been estimated that 50 percent of the large growers stood in need of borrowing. Interest rates were high. According to the recollection of one Santander coffee producer, the export-import firm of Steinfeld brought the interest down in the 1870s from 18 to 12 percent. Santander growers remember with gratitude the German firms of Breuer Möller and Company and Van Dissel Rode and Company because of their reasonable charges. Smaller exporters likewise extended credit directly, or indirectly through agents in outlying towns, to the small coffee growers.

V

The end of the First World War marked an important change in the methods of exporting coffee to the European and North American markets. Prior to 1920, coffee was consigned by Colom-

viduals long connected with the coffee industry and coffee trade in both Colombia and the United States. Special acknowledgment is made to the following individuals: Francis Hughes, Alberto Camilo Suarez, G. E. Suarez, Francis M. Kurtz, Peter Collins, Bernardo Lopez, Adolfo Ariztizabal, and Frank Bradley.

bian exporting firms or large coffee growers to independent commission agents (or brokers) in New York, London, Hamburg, and sometimes Le Havre. The commission agent, advancing a certain percentage of the value of the shipment to the Colombian exporter, sold at the best available price, deducted his 2 to 2½ percent commission, and once the delivery was completed, remitted the balance of the sale price to the Colombian exporter. Perhaps the best known firm of this type was G. M. Amsinck and Company in New York. It enjoyed a popularity and confidence in Colombia, which was due not only to its efficiency but to the fact that it ran an able export business of its own designed to meet precisely the needs of the Colombian exporters and growers. For example, a Colombian coffee producer, selling his coffee to an exporter, specified that he needed 20 yards of woolen cloth of a special type, a baby carriage, and a plow. The Colombian exporter, at the time that he consigned the coffee to G. M. Amsinck and Company, included his client's import order. This company secured the specified articles through its own employees or agents, promptly dispatched the shipment to the Colombian exporter, who was of course an importer as well, debiting the cost against the proceeds of the coffee consignment. The extreme convenience of this method of satisfying needs, with a minimum of paper work or transfer of money, appealed to the Colombian coffee producer and gave him a confidence in the foreign firm that almost approached the feeling of a personal relationship. Another well-known firm was Mecke and Company; while similar firms in London were Enrique Cortés y Compañía and Frederick Huth and Company.

However, a great many foreign commission agents did not give the satisfactory service provided by the firms mentioned above. In fact, some exacted exorbitant commissions by concealing the charges in a system of fictitious accounting. Because of this injustice and because the foreign agents were under little or no incentive to seek out the highest bidder in disposing of the consignments, Colombian exporters finally decided to go abroad to represent themselves. They could see no reason why the commissions should not be collected by them rather than by foreigners. Between 1900 and 1914, therefore, as the coffee industry recovered from its setback at the turn of the century, several new and rising export firms established offices in New York. The Saenz brothers were active by

1902.⁶ Between 1912 and 1914, the Colombian firms of Vasquez, Correa y Compañía, Londoño Hermanos, Alejandro Angel y Compañía, the Antioquia Commercial Corporation, and Pedro A. Lopez y Compañía were in open business in New York. The war favored them not only because of the increased business but also because several non-Colombian competing firms were weakened as a result of being placed on the "black list."

In 1920, however, the catastrophic fall in coffee prices proved too great a strain for the slender financial resources of these new Colombian agencies, and they all collapsed. Underestimating the financial risk they were carrying, especially during the severe summer of 1919 when huge shipments of coffee were sitting stranded on Magdalena River boats and in river-port warehouses, the firms were caught completely unprepared to withstand the loss. Their failure ended in a complicated history of sale and reorganization.

The crash in coffee prices brought ruin not only to the exporters but also to the whole financial structure of Colombia. Banks that were caught with large stocks of goods for export went under. A great gap in the marketing system was thus left open. Unless this gap were filled, the North American market would go begging for large supplies of mild coffee both because of the absence of the machinery and credit for moving the coffee and because of the need for credit to tend the coffee farms and gather the coming crops.

Large United States coffee importers were the first to step into the breach. The American Coffee Corporation established its buying offices in 1921; second came Hard and Rand, followed by Grace and Company, and Steinwender, Stoffregen and Company. The American Coffee Corporation, being a subsidiary and sole importer and roaster for the Atlantic and Pacific Tea Company, has bought almost exclusively for its own account. Other large United States roasters have bought directly or indirectly through the other above-mentioned United States import houses or through Colombian export firms.

At almost the same time, though possibly a little later, there appeared out of the Colombian financial reorganization several new powerful Colombian export firms. One of these was Jesús M. Lopez and Company. This gentleman began operating in coffee in 1900. Partner of the firm Angel, Lopez y

Compañía, which went under in 1919-20, he reestablished himself on an independent status in 1923 with an organization which he and his sons have developed into one of the largest present-day exporters, handling an average of 10 percent of Colombia's total exports. Another of Colombia's principal coffee exporters to emerge after the crash was Adolfo Ariztizabal. Now reputed to be the richest Colombian, he was a "self-made" man. Born in the little town of Santo Domingo, Antioquia, Ariztizabal worked for a time as a minor employee in a government liquor store in Silo, Santander, later moved to Duitama, Boyacá, and finally settled back in the Cauca Valley about 1915, where he became engaged at first in a modest and soon in an expanding way as an importer. When the coffee price crash came, he was sitting in Cali with large quantities of imported merchandise which he was unable to dispose of because his ultimate customers, the coffee growers, were unable to harvest their crops for lack of credit. Ariztizabal met the situation by advancing credit to coffee growers partly in the form of merchandise and partly in cash. Establishing agencies in every part of Colombia, Ariztizabal y Compañía gradually built up its position until in the year 1945, it exported 30 percent of Colombia's crop.

VI

The large exporters of coffee from Colombia today, whether Colombian or North American (the United States is the only foreign country from which importers have come to Colombia to establish exporting and direct-buying agencies), purchase their coffee more or less according to the system described below.

An exporting organization may have as many as thirty principal agents scattered throughout the country in the centers of the growing regions. These agents are men with at least reasonably important economic positions in their respective communities. Each agent buys coffee in his area on a commission basis, receiving 5 cents (Colombian currency) per arroba of approximately 12 kilos. He is supplied by the company with bags and necessary funds. As security, the company takes out a mortgage on some piece of property belonging to the agent. Once a week he is notified of how much coffee he is entitled to buy and at which prices. He is generally under contract not to sell to any other exporting firm, except by express permission of the company.

On his part, the agent sets up for himself a loose

⁶ Pardo, "Orígenes de la industria cafetera," *El Siglo* (Bogotá), 10(3404):3 (Aug. 4, 1945).

system of subagencies with at least one in each tiny market of his area. The relationship between the agents and subagents is not controlled by the company. The former may take out mortgages on the property of subagents, or they may buy directly without any agreement whatever. In times of coffee harvest, a vast number of small shops accept coffee as payment from the small growers for debts incurred or as future credit or even for cash, so that at crop time there is a large market in the small towns from which to buy.

The agent, once having bought and acquired possession of the coffee, delivers it to the nearest company *trilladora* for hulling and cleaning. A company employee at the *trilladora* inspects the coffee on delivery. If the lot of coffee does not reach the company's standard of quality, the agent is left with the coffee to market on his own account. This is the agent's risk. If the lot is accepted and passed by the inspector, the agent's functions are at an end.

In certain parts of Colombia—particularly in the Antioquia, Bogotá, and Santa Marta areas—the agent system tended to die out. This evolution occurred as follows. An agent, who lived in a municipality, say, of Antioquia and who depended on a large Medellín exporter for his commission of 5 centavos an arroba, was naturally looking for ways to improve his economic position. He had built up in a variety of ways a small amount of capital and now found himself able to buy and sell coffee on his own account. He even made small loans to the growers. An important factor contributing to this change was the development of telephone and telegraph communications with the large coffee markets such as Medellín, which enabled the small man in the outlying towns to keep abreast of coffee prices and thus minimize his risk. Improved transportation likewise shortened the period of time during which he financed his part of the marketing process. On the other hand, there is, today, a counteracting tendency for some of the independent middlemen (the *loteadores*) to pass from the

scene. These small dealers would customarily meet the peasants at the edge of town as the latter were carrying their coffee to market. Here they would buy coffee and, by taking advantage of the peasants' ignorance of prevailing prices, make a sizable profit. However, when the Federación Nacional de Cafeteros de Colombia began to publish its daily minimum price in every market of the country, this form of exploitation was no longer possible. Generally speaking, therefore, it is true that an exporter-agent system prevails in Colombia.

The method by which coffee is sold abroad has been altered to an important extent by the shortening of transportation and communication time. In the nineteenth century and even up to the First World War, it was possible for an exporter to buy from a producer in Colombia, consign to a foreign commission agent and for the sale not to be completed until eight months later. Ever since the price crash of 1920, however, and the elimination of the consignment system, coffee has been sold in the foreign market before it leaves the hands of the Colombian exporter. For a short time around 1930 Colombian coffee was sold on the New York Coffee and Sugar Exchange, but the volume was too small to justify the special contract. Although the consignment system has been eliminated, it has not been replaced by directly-controlled representatives of Colombian exporters. A very few Colombian exporters, it is true, sell through their own branches in New York; a second small group sells to the highest-bidding importer; but the great majority have exclusive connections with particular United States importers to whom they direct all their business.

The movement of coffee from grower to drinker, from Colombian to United Statesan, has provided not merely the basis for extension of United States commercial enterprise abroad, but, more significantly for Inter-American agricultural relations, it has furnished the basis of the internal economic growth of our neighbor to the South.

THE COMING OF THE SWEDE TO GREAT BRITAIN

AN OBSCURE CHAPTER IN FARMING HISTORY

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The coming of the turnip to the farmers' fields is rightly regarded as a landmark in British agricultural history, but it was not of itself a complete answer to the age-old problem of winter-keep for stock.¹ For it suffered from two serious disadvantages, its attraction for the fly and its poor keeping qualities, and these defects rendered it an unreliable basis for the rotations of the Agricultural Revolution. Hence the importance of the two allies which came to its assistance in the later eighteenth century, the fly-immune mangold and the hardier swede. The former was introduced in 1786, and its development can be traced with fair certainty if some difficulty. But the story of the swede, though equally interesting, is far more obscure.

Thus, the historian who concluded that "no record seems to exist showing when or by whom the swede was introduced" somewhat understated the case. There are plenty of records, indeed too many, for a survey of old and modern books shows that the swede was introduced "from Germany, circ. 1750"; "in 1755"; "from Germany in 1766"; by a Mr. Airth who sent his father, a Forfarshire farmer, a packet of seeds from Gothenburg in 1777; by a Mr. Stewart of Hillhead about 1787; "from

Lapland" at some unspecified date prior to 1794; with more detail but equally datelessly "by Sir Thomas Beevor (of Hethel Hall in Norfolk) according to some but really by his son, Dr. Miles Beevor, who obtained seeds from the brother of Lord George Gordon who was given them by the Swedish ambassador"; by Sir Josiah Banks about 1790; and finally by a Swedish nobleman, Le Chevalier d'Edelcrantz, in 1803-4. In fact, *tot libri, tot sententiae*.

The story is further complicated by nomenclature, for the swede or rutabaga was originally known, at least by some, as the turnip-rooted cabbage. This name, unfortunately, was also applied to kohlrabi, "the turnip-cabbage or, as it is sometimes called, the cabbage-turnip." Some of the old writers distinguish between swede and kohlrabi; others make their meaning clear by description or reference; but in many cases it is impossible to discover from the text what was meant by the term "turnip-rooted cabbage." Indeed, one imagines that in so localized an industry as Hanoverian farming the phrase was applied casually to whichever crop the particular writer happened to know. This general confusion is well summarized in the account of the introduction of the swede which Sir John Sinclair gave in 1814. About 1750, he said, the swede or taprooted cabbage was introduced from Germany to England, where it was known as the turnip-rooted cabbage. Some sixteen years later it was taken to both Scotland and Sweden and was then reintroduced to England as the rutabaga or swede.

This evidence, when coupled with the probability that the lack of home-grown seed would have compelled pioneers to order their stocks from abroad, argues several independent introductions, those responsible being remembered in their county annals as the "onlie true begetters." But the first introduction appears to have taken place in 1766, and its story illustrates in interesting fashion the farming conditions of the time.

¹ This article appeared originally in *Ploughshare*, January 1948, p. 3-4, and 8, and it is here printed with the kind permission of the Ministry of Agriculture.

The information in this article was derived from the following publications, exclusive of standard modern books of reference: *Museum Rusticum*, 1766; Robert Dossie, *Memoirs of Agriculture, and Other Oeconomical Arts* (3 vols., 1768, 1771, 1782); *Gentleman's Magazine*, April 1790, p. 297; Bath and West Society, *Correspondence*, vols. 1-10; Board of Agriculture, *County Reports*; Sir John Sinclair, *General Report of the Agricultural State, and Political Circumstances of Scotland* (5 vols., Edinburgh, 1814); Anon., *General History of the County of Norfolk* (1829); C. Hillyard, *Encyclopedia of Agriculture* (1831), and *Practical Farming and Grazing* (ed. 3, Northampton, 1840); Richard Noverre Bacon, *The Report on the Agriculture of Norfolk* (London, 1844); Royal Agricultural Society of England, *Journal*, 6:5 (1846); J. M. Wilson, *Rural Encyclopedia* (1847).

By the 1760s the unreliability of the turnip in hard winters and the consequent Hungry Gap between "the turnip and grass seasons" of "the winter and summer systems of feeding" had become a major agricultural problem, and the Royal Society of Arts was among those who "earnestly and assiduously" sought "a winter pabulum for cattle, some plant which would afford a profitable crop and stand till the middle of spring despite the severest frost." Burnet, borecole (kale), rape, and even furze were tried and finally the more promising kohlrabi. This plant had been known to John Gerarde and in Elizabethan times had been grown as we grow cucumbers or melons, a "dainty meat" in gardens, but it was then forgotten until brought back to public notice in the early eighteenth century, mainly by John Wynne Baker who was secretary of the Dublin Agricultural Society in the 1730s. A detailed account of it appeared in the *Museum Rusticum*, published by the Royal Society of Arts in 1766, and premiums were offered for its successful cultivation as an alternative source of winter-keep.

Among those who competed for these prizes was John Reynolds of Adisham in Kent whose letters show that he was a man of education as well as enterprise. This farmer bought his seeds from Holland and in 1766 received a packet of seeds of a somewhat different and hardier root which, his merchant informed him, was commonly grown in Sweden, Russia, and even Lapland. The result, he wrote, "was, as I apprehend, a new species of turnip-cabbage" which he christened, somewhat unimaginatively, the cabbage-rooted turnip or cabbage-turnip.

The interest aroused was considerable. The Royal Society allowed Reynolds a premium of £50, distributed the new seeds to its members, carried out experiments on its own account through Robert Dossie, a chemist of agricultural interests who is mentioned in James Boswell's *Life of Johnson*, and offered prizes for the cultivation of this "turnip-rooted cabbage which is not the same as the turnip-cabbage but that kind newly introduced to this country." On the whole, the correspondents who provided the society with information, including costings, preferred this new swede to the old kohlrabi, and in 1774 Reynolds could write: "I find [this new root] is now propagated more in this neighbourhood with all desired success and it begins to spread apace throughout every county in England and Wales and in some parts of Scot-

land." But in this he was rather premature, for the Correspondence of the Bath and West Society and the County Reports which the Board of Agriculture published between 1793 and 1815 show that the transition of the swede from an experimental to a commercial crop was neither easy nor rapid.

It is true that the value of the swede's peculiar properties were soon appreciated and publicized. As early as 1783, for instance, one writer termed it "certainly the most valuable crop within the whole range of husbandry... for it is a firmer and more substantial food than the turnip." Ten years later, another praised it for "its productive growth, its nutrition and its hardiness," and many noticed that it stood the hard winter of 1794-95 better than the turnip. Tugwell no doubt exaggerated when in 1799 he hailed the new root as a "remedy for all our grievances and a general panacea for all our complaints," but it is clear that even before that date a substantial minority of informed men would have agreed with the verdict of the standard modern textbook that "the swede is the most valuable variety of the turnip family... It has a longer period of growth and is hardier than both of the other two sorts [of turnip] and can be kept for a longer period before being used."

On the other hand, the conditions of the time laid many obstacles in the way of new crops. The confusion of contemporaries about the introduction and even the identity of the swede illustrates the prevailing ignorance, and Sir Thomas Beevor cannot have been alone in his complaint of 1792 that "none of the particular properties of the various plants lately recommended for the winter food of cattle have been discriminated or fairly stated." Nor were there any research centers or advisory services save local societies and, after 1793, the Board of Agriculture which for some reason paid little attention to the swede. The future of this root lay, therefore, in the hands of private pioneers, and technical progress depended on isolated experiment and casual publication or comparison of information.

It was, for instance, many years before the wasteful and risky method of transplanting gave way to the more efficient direct sowing. Further, these pioneers were, it would seem, generally of the leisured type who were not directly dependent for their living on their crops, and their work suffered from the traditional bias of the commercial farmer against the "bookman" and "the gentlemen who have no need to worry about their rent." Beevor,

for instance, found his neighbors inclined to "overlook and neglect" his discovery, and in 1804 the county reporter for Hertfordshire mentioned with pride that in his district swedes were known "on the farms of tenants as well as those of gentlemen." Similarly, it was a certain Colonel Mellish who introduced the swede to Nottinghamshire about 1800 and gave seeds to "leading agriculturists in the neighbourhood." Elsewhere, however, the "strong recommendations" of such pioneers to working farmers proved less successful, and in 1794 one of the swede's champions, who had won several Royal Society of Arts premiums for its cultivation, lamented the general prejudice against the new root, the reasons for which were, he found, "many but withal (however mysterious) so formidable as probably not to be moved or shaken by anything that could be said or written on it." A more material hindrance was the difficulty or even impossibility of obtaining good seed. It was this "lack of dependence which can be placed on bought seed" that caused the regretful abandonment of the swede by the East Lothian farmers, apparently in the early 1800s, while the seeds a Norfolk farmer bought from a London bookseller in 1805 produced "miserable affairs, like cabbage stalks with the cabbage omitted" so that he left further experiment to his neighbors. In Nottinghamshire, too, the first swedes were badly grown, and sheep did not take to them.

Nevertheless, "man is a tool-making animal" and can be trusted to exploit any tool, organic as well as mechanical, which comes his way. And so it was with the swede, though the statistical darkness of George III's time obscures the details of the story.² It is difficult to make a coherent story from stray references to the new root in Hertford-

shire in 1781, in Scotland in 1786, in Norfolk in 1792, and in Nottinghamshire in 1794, but the Board of Agriculture's County Reports show that the swede was turning from an experiment to a crop in the first decade of the nineteenth century. In Staffordshire in 1808, for instance, "the turnip-rooted cabbage is now entirely neglected, replaced by the swede which is either a superior plant or the same plant improved." In Oxfordshire in the following year "it is completely introduced and makes a very distinguished figure to the honour of the agriculture of this county," and in Derbyshire in 1813 it was "very fast spreading, as in most counties of England."

By the year of Waterloo, therefore, half a century after the first seeds entered England, the swede, described by contemporaries as "one of the most useful articles of pasture we possess" and "an acquisition of greater importance to the feeders of cattle and sheep than can be imagined," was established as a farm crop. Thus was completed the coming of the rootshift of the Agricultural Revolution which is among the great triumphs of British farming history.

² The introduction of the word *statistics* is generally credited to Sir John Sinclair, first President of the Board of Agriculture, who took it from the German in the 1780s. It is clear that the men of the Agricultural Revolution seldom thought in terms of figures. Witness the discrepancies and errors in certain of the Board's publications. Incidentally, the first census was only taken in 1801, and agricultural returns did not appear till 1866. The present writer's acquaintance with the older farming literature is casual in the extreme, but the first book he knows which has a firm statistical basis is Richard Noverre Bacon's *The Report on the Agriculture of Norfolk*, the Royal Agricultural Society of England prize essay for 1844.

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